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85th Congress
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STUDY OF MORTGAGE CREDIT

DOES THE DECADE 1961–70 POSE PROBLEMS IN PRIVATE HOUSING AND MORTGAGE MARKETS WHICH REQUIRE FEDERAL LEGISLATION BY 1960?

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SUBCOMMITTEE ON HOUSING
UNITED STATES SENATE

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SUBCOMMITTEE ON HOUSING

UNITED STATES SENATE

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LETTER OF TRANSMITTAL

Hon. JOHN SPARKMAN,
Chairman, Subcommittee on Housing,
United States Senate, Washington, D. C.

DEAR SENATOR SPARKMAN: This letter transmits papers submitted by authors assigned specific topics for the mortgage credit study being conducted by the Subcommittee on Housing.

At the direction of the subcommittee, this study is being made to answer the question, "Does the decade 1961–70, pose problems in private housing and mortgage markets which require Federal legislation by 1960?"

Specific topics were assigned to individuals who are particularly well qualified through experience or academic training. In selecting the authors every effort was made to obtain representation of any variance in point of view on topics being covered. The authors were selected from among the best available talent in private industry and from students and professionals in academic circles and in Government agencies.

The papers are printed as submitted, without editing except for numbering of tables and minor clarifying changes at the beginning of some papers.

Sincerely,

JAMES B. CASH, Jr.

LETTER OF TRANSMITTAL.

LETTER FROM SENATOR SPARKMAN

Hon. J. W. FULBRIGHT,
Chairman, Senate Banking and Currency Committee,
Washington, D. C.

DEAR SENATOR FULBRIGHT: I am transmitting the papers received from authors participating in the mortgage credit study which the Subcommittee on Housing is conducting. This study is being made to answer the question, "Does the decade 1961–70 pose problems in private housing and mortgage markets which require Federal legislation by 1960?"

It is generally agreed that during the next 10 years our economy will expand far beyond today's level. The rate of home construction, which has been at a constant level for the past several years, must increase to meet the needs of a growing population with a rising standard of living. Net new family formation resulting from the births of the forties, the replacement of units to be demolished in order to carry out the national housing policy of a decent home for every American family, the increased mobility of American families, and the higher standard of living toward which we strive, will require more and better housing facilities in the future.

The question of whether there will be adequate resources to take care of those needs should be answered. Mortgage credit is the principal resource problem. Although total new capital formation has been increasing at a constant rate during the last 10 years, the share going to residential mortgages varies considerably from year to year. It is incumbent upon committees of Congress having responsibilities in the housing field to seek ways for providing an adequate supply of home mortgage credit in the future.

The first step in the study was to expand the basic question into an outline of component topics and to select qualified authors to prepare papers on these topics. This has been done. The next step is to distribute the compendium of papers to participating authors, interested Government agencies, and to other interested persons, both public and private. It is planned that some time in 1959 the papers will be the subject of a hearing by the subcommittee. The authors will be asked to give an oral summary of their papers and be questioned by members of the subcommittee and staff. Other persons may also submit statements for the record at these hearings, which statements would comment upon or supplement data and views expressed by authors of the papers.

Subsequently, the staff of the subcommittee will draft legislative proposals which seem to be indicated by informed opinion expressed in the papers and in the record of the public hearing. From this point on, if introduced in the Senate, these legislative proposals will be considered in the usual way.

Sincerely,

JOHN SPARKMAN.

Study of Mortgage Credit

I. Demand and Need Factors

A. Changes in Inventory of Households

GROWTH IN HOUSEHOLDS IN THE UNITED STATES, 1960, 1965, AND 1970

ELMER C. BRATT, Professor of Economics, Lehigh University, Bethlehem, Pa.

This memorandum is submitted in response to the following questions:

> What is a reasonable estimate of the net increase in nonfarm households which will occur in each of the years 1961–70?
>
> To what extent will family migration increase the demand for housing in localities or regions expected to receive the migrating families?

At the outset, note should be taken of the fact that the growth in households will not represent the growth of, or total activity generated in, residential building. As for growth, since households are defined as occupied dwelling units, only a part of the increase in housing stock is represented. Nonhousekeeping facilities, embracing vacation and summer cottages, are not included. This is a type of housing facility which has been growing rapidly. Changes which may occur in the size and quality of housing units are omitted. Size and quality may be important, since an occupied dwelling ranges from a single room to an elaborate home. Additions and alterations are made without influencing the number of occupied dwelling units.

Families may move to hotels, institutions, or large roominghouses—into what is known as quasi-households—and change the demand for occupied dwelling units. The vacancy rate, aside from seasonal dwellings, may change and thereby influence the number of additional dwelling units required. We assume that, aside from possible migrational effects, the factors noted in this paragraph will not produce a significant influence in the next 10 years.

Finally, housing may be replaced at a more rapid rate in the future than in the past because of demolitions arising from the roadbuilding program and because of aging of the housing stock. Replacement may add significantly to housing activity but, obviously, will not add to the housing stock.

Clearly, growth in number of households will poorly represent activity in residential construction. No effort is made in this paper to indicate the level of total residential construction which may be expected in future years.

33034—58——2

HOUSEHOLDS AS OCCUPIED DWELLING UNITS

The household aggregate may not represent an entirely consistent division of housing growth. For one thing, the demographic concept of households must be forced to remain equivalent to the stock of occupied dwellings; it is possible, for instance, that what is sociologically a single household may temporarily reside in more than one dwelling unit. Probably this difficulty does not greatly distort representation of the growth of dwelling units.

A more serious difficulty may be involved in the exclusion of nonhousekeeping facilities. For instance, it appears that, to a substantial extent, the demand for permanent dwelling units has been greater in the postwar period than the increase in households because of a shift in residence from seasonal quarters when the available supply of permanent dwellings increased. The reverse movement could occur. If the location of industry should shift to built-up vacation areas, a significant number of vacation dwellings could become the permanent residences of households.

In fact, we know that housing quarters have been provided, to an important extent, especially for primary-individual types, by conversion of old mansions or other buildings to apartments. Apparently, the supply of such buildings for this purpose has become more limited than in the past.

An increase in households need not necessarily require a proportionate increase in supply of dwelling units, even though we begin at a point when the vacancy of dwelling units used for this purpose is "normal." Lacking specific information that the above factors will be of major importance in the next decade, we ignore them in the following analysis.

THE FORECASTING PROBLEM

Since the problem faced is one of forecasting, it may be well to give brief consideration to the procedure involved. The first step in forecasting represents statement of the most plausible assumption which may be made about the changes likely to occur in the future in the activity in question. In the present case, a growth forecast is being considered. A fairly stable pattern is to be expected, with explicit recognition that the actual levels in any year will rise above or fall below the indicated figures. In other words, the levels visualized for 1960, 1965, and 1970 are not actual levels but the average which might be expected, taking into consideration the position in adjoining years.

The Census makes what is called projections rather than forecasts of the future level of households. These are founded on mechanical projections of the past changes in demographic relations applied to expected surviving population at the given dates. The rates of change in several past periods have been employed by the Census in various projections developed. Four series published in 1956, as well as four new series presented for the first time in this monograph, are worthy of consideration. In the present paper, principal attention is given to the 1956 Series II (published August 31, 1956, in Current Population Reports Series P–20, No. 69). The average rates of change occurring in demographic relations from 1950 to 1955 are assumed to continue in this series. Some advantage might be expected

if the four series (A, B, C, and D) presented by the Census in the present monograph were employed, since more recent rates of change were assumed. These projections, however, do not achieve results materially different from those made in 1956. Furthermore, not enough information on types of households is available in the more recent projections to make effective use of them in the present paper.

The principal purpose of the present paper is to examine the Census projections to determine if they are consistent with related variables expected in the future. Because the measurement of related variables is available only to a limited extent, the objective has been but partially attained. Indicating the type of relationships which are plausible may serve a useful purpose, however, even though no firm estimates can be made, for projections of past trends are useful as forecasts only to the extent that consistent relations are achieved. While theoretically it might appear more defensible to develop projections than forecasts, the extrapolations are likely to be employed as forecasts if other indications of the future are not available.

INDICATED GROWTH IN TOTAL HOUSEHOLDS

Contrasting the Census Series II projection for households with the Census projection II for labor force (Current Population Reports Series P–50, No. 69, October 1956), which projects the rate of change in labor participation rates observed from 1950 to 1955, it is found that households and labor force are assumed to grow proportionately. Households are projected at slightly over 70 percent of labor force for 1960, 1965, and 1970. This represents approximately the present percentage. However, there has been a steady rise in the number of households relative to the labor force since prewar from 62 percent in 1940. The change in the percentage is partly accounted for by the undoubling of families which has accompanied rising income and increases in available supply of housing. Undoubling has little further to go. The number of subfamilies living with relatives has dropped substantially.

Undoubling of families, however, does not represent the only motivation for increases in household formation with the same labor force. Relatively large increases have been occurring in primary-individual households. To some extent, this represents the maintenance of households by oldsters withdrawn from the labor force—e. g., households being maintained by an increasing number of persons with the support of more ample old-age benefits.

The probable movement of households can be better understood if the aggregate is broken down into types, especially if family and individual types are looked at separately. Husband-wife households represent three-fourths of the total, other primary families about 11 percent, and primary-individual types 14 percent. The primary-individual types are rising faster than family, and will come to about 17 percent in 1970 according to the Census Series II projection. The rise is particularly marked in females setting up individual households. These increased a third between 1950 and 1955, 15 percent from 1955 to 1958, and are marked to increase 23 and 21 percent, respectively, from 1960 to 1965 and 1965 to 1970 by the Census Series II projection. This projection indicates an increase of 90 percent from 1955 to 1970, compared with 27 percent for total households.

It will be helpful to make separate examinations of different types of households because of the divergent forces responsible for growth. In this analysis we cannot go as far as we would wish because of insufficiency of relevant information, but making the examination will add perspective to visualization founded merely on projection of rates of change occurring during particular periods in the past.

HUSBAND-WIFE HOUSEHOLDS

Husband-wife households obviously depend on the number of married couples. Since prewar, these households have increased more rapidly than the number of married couples because of undoubling. At present, they represent about 97 percent of married couples and are projected to rise to nearly 98 percent in 1965 and 1970 by the Census Series II. Since some doubling of families always will occur, this must represent a near-maximum percentage. If a tendency should arise for old couples to move into quasi-households, the percentage might actually fall. With no satisfactory evidence on that question, we may accept the Census projection as plausible.

Question might be raised as to the projection of married couples. This depends on mortality rates assumed and the marriage rate. The median age of women at first marriage declined about a year from 1940 to 1950, and has remained approximately constant since. The Census projections assume approximate maintenance of the 1950 median age of slightly over 20 to the year 1970. No obvious basis is apparent for questioning the Census estimates of mortality and marriage age. We therefore accept the Census Series II projections of husband-wife families as reasonably plausible (in millions): 1960, 38.5; 1965, 41.1; 1970, 44.4.

OTHER MALE HEAD AND FEMALE HEAD PRIMARY FAMILIES

Principal factors which limit the growth of these groups are remarriage which shift the families into the husband-wife category and the extent to which the families involved double up with others. The Census Series II projection indicates no growth in other male-head families because of high remarriage rates and relatively high male mortality rates in the relevant age groups. After 1960, the female-head families are projected to rise more slowly than husband-wife families.

These groups, doubled up with other families—subfamilies and secondary families—are assumed to grow at about the same rate as the primary families of these types; for Census Series II projection the subfamilies and secondary families represent 14 percent in 1970, the same as in 1955. It is true that this percentage has remained approximately constant since 1940. About a million families are involved from 1960 to 1970. The actual number now is about 800,000, approximately the same as in 1940. We tentatively assume that about 700,000 would be a more appropriate estimate in 1970 if recognition is given to rising standards of living to be expected at growth levels. This would add 300,000 to the primary-family household estimate for that year.

A useful check is obtained by comparing the total of primary-family households, including husband-wife, with total families, including subfamilies and secondary families. The fact is that, because of the remarriage factor, total primary families are as homogeneous as the divisional groups. Using the Census Series II projection, the percentage remains at the present level of 95½ percent in 1960 and rises to 96 in 1965 and 1970. If we make the shift of 300,000 to primary-family households in 1970, as indicated in the above paragraph, the percentage becomes 96½.

The Census Series I, III, and IV are founded on different rate-of-change assumptions. For I, 80 percent of the rates of change from 1947 to 1955 are projected; for III, half of the rates of change from 1950 to 1955; and for IV the average levels in 1955 are projected horizontally. The resultant projected increases from 1955 to 1970 for primary-family households vary from 19 to 23 percent. For I, the projected increase is 23 percent; for II, 21 percent; for III, 20 percent; and for IV, 19 percent. We do not believe this to be a very helpful statement, but we present it to indicate what the Census is making available to the user when these rather technical projections are produced. Each of the other three projections could be compared with number of families, etc., as is done for series II, above. The conclusions would be much the same, however, for the particular rate-of-change base is not the major factor in that comparison. If Series II is adjusted by reducing the number of doubled-up other-male-head and female-head families by 300,000 in 1970, as suggested above, the increase from 1955 to 1970 becomes 22 percent.

Information on the number of primary-family households obtained in Census Series B projection, presented elsewhere in this monograph, is available to us. This series produces a projection of 25 percent from 1955 to 1970. The assumption involved is that one-half of the rate of change from 1950 to 1956–58 will continue to 1965, and one-fourth from 1965 to 1970. It is possible that an improved assumption has been obtained when the base period from which the projected rates of change are taken ends with an average of 3 years instead of a single one. Comparisons, however, are not available with contrasting measures, such as number of families, for, presumably, comparable projections should be modified in using the new projections. Without such comparisons, the new projection is difficult for us to judge.

PRIMARY-INDIVIDUAL HOUSEHOLDS

Unrelated individuals, persons not living with any relatives, have formed their own households to an increasing extent. Only slightly more than a third of such individuals were in their own households in 1940, while nearly two-thirds are now. According to Census Series II, three-fourths will be in their own households by 1970, but this is not further increased by 1975. No doubt, there is some upper limit to the proportion of unrelated individuals who will live in their own households. Most importantly, this depends upon the distribution of unrelated individuals, for their situations differ greatly. Some female servants may be expected to continue to live in the employers' households, and so, also, some male hired hands. It would help to be able to segregate these parts of the unrelated-individuals total, but we have not been able to do that effectively.

Widows have come to live by themselves to an increasingly extent because of more ample social security and other old-age benefit plans. It is no doubt true that all unrelated individuals who are similarly independent financially would not choose to live in their own household, but there is no good answer at the present time as to what proportion would choose to do so. Furthermore, there is no good answer as to what proportion are "financially independent," i. e., are well enough to do that they could maintain their own households if they wished to. Also, it would be helpful to know the proportion of unrelated individuals who fall in the lodger category. How many of these would form their own households if able to do so?

A second factor which may or may not be important in determining the number of primary-individual households is the size of the household. All we have to go on now is the rather poorly supported generalization that 4 out of 5 primary-individual households are 1-person households. To make an intelligent forecast it is important to know what changes have been occurring in the size of these households and the factors which are responsible for the changes if any have been occurring.

Unrelated males have behaved very differently from unrelated females. The male total was greater in 1940, but has fallen below the female total, presumably largely due to the greater tendency of males to remarry, the marrying of younger spouses and to the higher mortality of males. There are, however, fundamental differences between the makeup of unrelated individuals in the male and female categories which we poorly understand. The proportion of females in independent households was larger than for males even in 1940 and now represents three-quarter contrasting with only half of males. A crying need exists for examining the different makeup of these groups but we have been unable to do this satisfactorily because of insufficient information and because of limited time.

Information available to us shows that, in the new Census Series B projection for 1970, female-primary-individual households comprise over 80 percent of female unrelated individuals, while male-primary-individual households comprises less than 60 percent. Without satisfactory information on the makeup of these unrelated individual groups it is difficult or impossible to make meaningful interpretations of these percentages.

With no useful guides to the contrary, we accept the Census proportion of about three-quarters of unrelated individuals comprising primary-individual households for the purpose of a tentative forecast presented here. Nevertheless, serious question must be raised as to the level of the Census projections of number of unrelated individuals.

The number of unrelated individuals might conceivably be augmented substantially by related individuals leaving households headed by others. Using the Census projections of secondary individuals, a large number of related individuals over 18 years of age other than spouses of the family head are projected to remain within the primary-family-household groups. This comes to over 17 million in 1960, about 19 million in 1965 and over 21 million in 1970. A substantial proportion of these individuals are under 25 years of age. About 10 million are 25 years and over in 1960 and about 9 million in

1970. Under 25 years the individuals involved are predominantly male, but at 25 or over there is about an equal division between the sexes.

We may conservatively make the tentative estimate for our forecast that none of the individuals aged 18 to 24 will become unrelated individuals and that 10 percent of those 25 years of age and over will by 1970. Obviously, there is no precise justification for this estimate. The fact is, however, that, with rising living standards, some of these individuals will probably move off into their own households. We estimate that all of the 10 percent will come into the primary individual-household group and that none of them will become secondary individuals. We assume that the proportionate splintering will be 2½ percent for 1960 and 5 percent for 1965. In summary, this procedure will add 900,000 to the household estimate in 1970.

TENTATIVE FORECAST

To provide a basis for discussion, we make a forecast starting with the Census Series II projection. For primary-family households we add to the projection on the assumption that doubled-up, other-male-head and female-head families will not increase above the approximate present level of 800,000, but on the contrary will decline to 750,000 by 1965 and to 700,000 by 1970. We add to the primary-individual households on the assumption that a small proportion of the related individuals in family groups will splinter off into the unrelated individual category. For this purpose we take 2½ percent in 1960, 5 percent in 1965 and 10 percent in 1970 of the family members other than heads or spouses 25 years of age and over as the proportions which will join the unrelated-individual group. On the basis of these assumptions the following figures are obtained (in millions):

TABLE 1.—*Primary families, primary individuals, and households in United States, 1955–70*

Year	Primary families	Primary individuals (from census)	Add from family groups	Total households
1955	41.7	6.1	----------	47.8
1958	43.4	7.0	----------	50.4
1960	44.5	7.3	0.2	52.0
1965	47.2	8.6	.5	56.3
1970	50.9	10.2	.9	62.0

COST OR PRICE OF HOUSING

We have made no assumptions about change in housing prices, except that the effect produced will be neutral or slightly expansionary. It is possible that large increases or large decreases in housing prices would have a substantial influence on the future formation of households. Past information on housing prices is not too effective because it does not well indicate the influence of whatever technological improvements may have taken place in house building. If there is any reduction in housing prices relative to overall consumer prices it will arise in improvements in building which increase productivity of the

operation. There is reasonable promise that a mild influence from this source may arise by 1970.

NONFARM HOUSEHOLDS

The above estimates apply to total households. The basic estimate is most simply made in this way because it is fundamentally dependent upon demographic figures. It is generally believed that the number of farm households will continue to decline. Convincing evidence in this respect is provided by known increase in the size of farms. Harvested acres per worker rose from 35 to more than 45 from 1940 to 1950, the rise is continuing and increased mechanization of farms lends evidence that the trend will continue in the future. According to Census estimates the number of farm households declined about 20 percent from 1940 to 1955.

The Census estimates appearing in this monograph and which indicate that the number of farm households will decline by about 900,000 from 1960 to 1970 appear plausible. This would mean that nonfarm households will rise by nearly a million more than the figures shown above, or in the order of 11 million for the decade.

BROAD MIGRATIONAL EFFECT

The sweeping shift of households away from the farm may leave vacant farm houses and thereby actually add to the total number of housing units needed. This has been, and probably will be, partly offset by the physical movement of houses from farms to towns.

No broad geographical region is likely to experience a substantial reduction in total number of households, and thereby little or no increase in aggregate housing is likely to be required because of this type of redistribution.

The regional requirement for new households will be closely related to the regional distribution of population added. Actually, the relation is closer to primary-family than to primary-individual households, but separate analysis would require much more study than we have given the subject. The migrational effect no doubt has a greater impact on increase in households than natural population increase does, but we have considered net migration only in marginal cases.

The regional population increases of persons 18 years or older from 1955 to 1970 shown by the Census Series I and Series IV estimates (Current Population Reports Series P–25, No. 160, August 9, 1957) were employed. Where substantial differences in the projections appeared, the net migration influence was reexamined (especially for the East South Central). The percentages were rounded and applied to

the increase in nonfarm households (assuming a decrease in farm households of about 460,000 from 1955 to 1960):

TABLE 2.—*Increase in population 18 years and over and increase in households for geographic areas, 1955–70*

Region	Percent of total population increase 18 and over	Increase in households (in millions)
Northeast	3	0.5
Mid-Atlantic	15	2.4
East North Central	23	3.6
West North Central	4	0.6
South Atlantic	17	2.7
East South Central	2	0.3
West South Central	8	1.2
Mountain	6	0.9
Pacific	22	3.4
Total	100	15.6

These crude estimates are put on a nonfarm basis because geographical redistribution over broad geographical areas is principally a nonfarm problem. Within some of these areas there will be a greater migration from farms than from others.

RECOMMENDATION

This paper is presented not to provide definitive forecasts, but as a plea for the provision and use of essential information in judging the validity of projections. If a preliminary indication of the required information has been provided we believe it will serve a useful purpose. Time projections from indicated rates of change in relevant demographic variables at a given base period provides the ordinary user little insight into why he should or should not expect an outturn commensurate with stated projections.

Lest some one take our illustrative forecasts seriously, in spite of repeated warnings, we should reemphasize that they apply to trend developments—the level of growth at "full employment"—and not to actual expectations in given years. This limitation means merely that the average condition over a period of say 3 years at the specified time can be expected to be better represented than actual conditions.

PROJECTION OF NUMBER OF HOUSEHOLDS 1961–70

Department of Commerce, Bureau of the Census

The following is submitted with reference to this question:

What is a reasonable estimate of the net increase in nonfarm households which will occur in each of the years 1959–70?

TABLE 3.—*Projections of the number of households, for the United States, farm and nonfarm: 1959–70*

[Numbers in thousands]

Year and residence	Number of households				Year and residence	Number of households			
	Series A	Series B	Series C	Series D		Series A	Series B	Series C	Series D
Total:					Nonfarm—Continued				
1959	51,607	51,280	51,124	50,967	1966	53,565	52,181	51,376	50,671
1960	52,425	51,877	51,614	51,350	1967	54,726	53,265	52,341	51,611
1961	53,088	52,424	52,096	51,769	1968	56,067	54,515	53,451	52,690
1962	54,093	53,253	52,826	52,403	1969	57,137	55,513	54,334	53,549
1963	55,275	54,227	53,683	53,149	1970	58,339	56,634	55,332	54,521
1964	56,483	55,224	54,561	53,912	Farm:				
1965	57,517	56,076	55,311	54,565	1959	5,470	5,436	5,419	5,403
1966	58,477	56,966	56,087	55,318	1960	5,400	5,343	5,316	5,289
1967	59,550	57,960	56,954	56,160	1961	5,256	5,190	5,158	5,125
1968	60,810	59,127	57,973	57,148	1962	5,193	5,112	5,071	5,031
1969	61,837	60,079	58,803	57,954	1963	5,141	5,043	4,993	4,943
1970	62,933	61,094	59,689	58,814	1964	5,083	4,970	4,910	4,852
Nonfarm:					1965	5,004	4,879	4,812	4,747
1959	46,137	45,844	45,705	45,564	1966	4,912	4,785	4,711	4,647
1960	47,025	46,534	46,298	46,061	1967	4,824	4,695	4,613	4,549
1961	47,832	47,234	46,938	46,644	1968	4,743	4,612	4,522	4,458
1962	48,900	48,141	47,755	47,372	1969	4,700	4,566	4,469	4,405
1963	50,134	49,184	48,690	48,206	1970	4,594	4,460	4,357	4,293
1964	51,400	50,254	49,651	49,060					
1965	52,513	51,197	50,499	49,818					

METHOD OF PROJECTING NUMBER OF HOUSEHOLDS

Population base.—Series II of the recently revised population projections (Current Population Reports, Series P–25, No. 187) was used as a framework in constructing each of the four series of household projections. The estimated number of households for 1956–58 based on the Current Population Survey was used as the base for projections.

Projections of marital status.—The first step was to project four series of percentage distributions for each sex by 5-year age groups, showing the proportion in each of three categories: "never married," "married, spouse present," and "other marital status." It was assumed in each series that the proportion "married, spouse present," among ever-married persons would not change from the level of 1956–58.

Projections of household heads.—The next step was to project the proportion of persons in each age group who were heads of households, treating separately men who were "married, spouse present," "other men," and women who were not "married, spouse present."

The main assumptions adopted in making the projections of household heads were as follows:

Series A: The average annual change from 1950 to 1956–58 in the proportion of persons who were heads of households was assumed to continue to 1965. One-half of this annual average change was assumed to continue from 1965 to 1970.

Series B: One-half the average annual change from 1950 to 1956–58 was assumed to continue to 1965. One quarter of this average annual change was assumed to continue from 1965 to 1970.

Series C: One-quarter the average annual change from 1950 to 1956–58 was assumed to continue to 1965. It was assumed that no change would occur thereafter.

Series D: The proportion of persons who were heads of households in 1956–58 was assumed to continue until 1970. In view of recent changes, this is a conservative assumption.

Interpolation for intervening years.—The household projections were made initially for 1960, 1965, and 1970 (as of July 1). The number of households for intervening years was estimated by interpolation, on the assumption that the year-to-year growth in number of households would follow the same pattern as the growth in the number of men who were in the principal ages at first marriage (age 20 to 24).

Projections of farm and nonfarm households.—It was assumed that the number of farm (actually rural-farm) households will decline by the same proportion during the 1950's and during the 1960's as during the 1940's. The number of nonfarm (actually urban and rural-nonfarm) households was then obtained by subtraction. In using the projected farm and nonfarm figures, it should be kept in mind that the questions on farm residence in the 1960 census will probably differ significantly from those used in the 1950 and 1940 censuses.

FAMILY INCOME AND BUYING POWER[1]

Department of Commerce, Office of Business Economics

This memorandum is submitted with reference to the following question:

> What is a reasonable estimate of the distribution by income levels of the total number of nonfarm households expected to exist in each of the years 1960, 1965, and 1970?

High levels of productive activity during the postwar period have given a substantial lift to the flow of incomes to consumers. In turn, the buying power thus generated has stimulated the demand for the goods and services turned out by the productive establishments of the Nation. This stimulus has been exerted directly through a broad and active market for consumption goods, and indirectly through the investment market, which has absorbed a record volume of capital goods and inventories to facilitate the enlarged flow of consumption.

The broad dynamics of these mutually interacting events have been outlined in chapter 1, and chapter 2 has dealt with regional aspects. We shall now examine the size structure of consumer incomes and buying power, since this is a particularly important link in the complete chain of developments.

The current average income of American families and single consumers is high—it was more than $6,000 in 1957. This average summarizes a distribution which shows prosperity to be widely diffused among the more than 50 million consumer units that comprise the Nation. Moreover, we are not dealing here with a static record. With only minor interruptions, American families have risen on the income scale during the postwar period, and have provided an expanding mass market for relatively expensive types of consumption goods and services. This market is a unique characteristic of the United States economy.

These major conclusions are drawn from OBE's estimates of the size distribution of family incomes, which also provide detailed documentation to support them, as well as the qualifications that necessarily go with broad generalizations of this type.

These estimates provide cross-section views of the distribution of before-tax income by size of income and of the number of families and single consumers in each income bracket. They also furnish information on income taxes paid by the various income groups and of the distribution of income after such taxes. The latter are a close approximation to a distribution on a disposable-income basis. Separate data are also given on the before-tax distribution of incomes of nonfarm families, farm families, and single consumers. This in-

[1] Except for the concluding section, the material submitted herewith is the same as that contained in ch. 3 of the forthcoming Office of Business Economics Publication, entitled "U. S. Income and Output," now in press.

formation on taxes and on major consumer groups makes possible a more precise interpretation of the broad conclusions relating to the level and distribution of family incomes.

The key series have been prepared in current dollars for selected years covering the war and postwar periods, and supplementary estimates adjusted for price changes have also been made. These time series show the upward shift of consumer incomes in terms of current dollars, and permit separation of the price and real volume factors that have contributed to this shift.

Finally, special estimates of the size distribution of income for the year 1929 have been prepared. These put into historical perspective the rise along the real income scale and the broadening of the prosperous middle-income markets which it entailed.

A CROSS-SECTION VIEW OF FAMILY INCOMES

The 1957 distribution of families and their incomes along the income scale is shown in figure 1 (and in table 9). The largest proportion of families—one-fourth of the total—was in the income range between $4,000 and $6,000. This bracket included the median family income of $5,060; one-half of the families had incomes below this amount and one-half had incomes above it. About two-fifths of families and single consumers were in the two adjacent income brackets, $2,000 to $4,000, and $6,000 to $8,000. The latter bracket included the mean family income of $6,130.

Fourteen percent of the total—comprising in large part single individuals and farm operator families—received incomes of less than $2,000. The remaining 20 percent had incomes above $8,000, with the proportions decreasing rapidly in the top-income brackets.

The distribution of income was pitched higher on the income scale than the distribution of consumer units. In the chart this is particularly visible in income brackets above $8,000, which include much larger proportions of aggregate income than of consumer units, and in brackets below $4,000 for which the reverse is true.

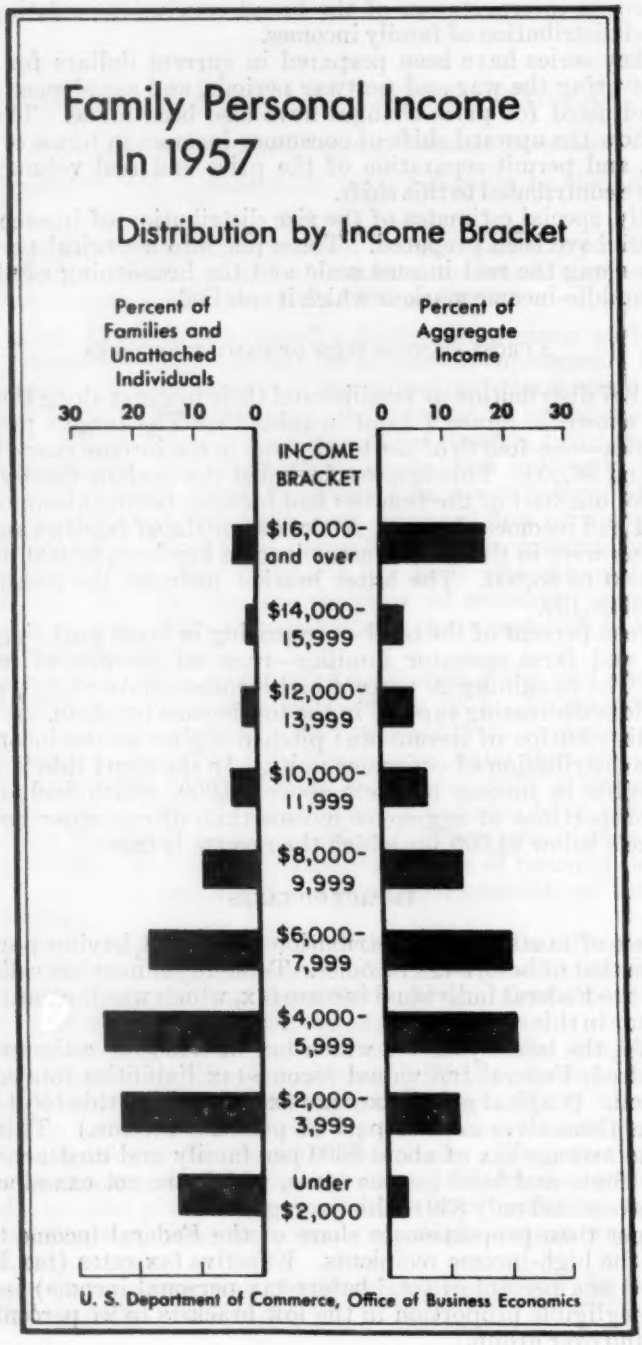
IMPACT OF TAXES

Because of taxation, the distribution of current buying power differs from that of before-tax incomes. Table 10 summarizes salient features of the Federal individual income tax, which was the most important factor in this connection.

In 1956, the latest year for which tax distribution estimates could be prepared, Federal individual income-tax liabilities totaled about $32 billion. (Capital gains taxes are excluded from this total because the gains themselves are not part of personal income.) This represented an average tax of about $600 per family and unattached individual. State and local income taxes, which are not examined here, would have added only $30 to this average.

A larger than proportionate share of the Federal income tax was paid by the high-income recipients. Effective tax rates (tax liability expressed as a percent of total before-tax personal income) increased from a negligible proportion in the low brackets to 21 percent in the $15,000 and over group.

FIGURE 1


Family Personal Income In 1957
Distribution by Income Bracket
Percent of Families and Unattached Individuals
Percent of Aggregate Income
30 20 10 0
0 10 20 30
INCOME BRACKET
$16,000- and over
$14,000- 15,999
$12,000- 13,999
$10,000- 11,999
$8,000- 9,999
$6,000- 7,999
$4,000- 5,999
$2,000- 3,999
Under $2,000
U. S. Department of Commerce, Office of Business Economics

The graduation of the Federal income tax is most substantial in the $15,000 and over range, which is not broken down further for 1956 because of lack of detailed information. Units in the higher part of this range are subject to tax rates that are much heavier than the average for the group.

Personal income, it should be noted, includes nontaxable items, such as certain types of income in kind and transfer payments; and all taxable forms of personal income are not fully reported on income tax returns. Thus, the effective rates on personal income are somewhat lower than those derivable from tax data.

Moreover, because the rates shown in table 10 are averages on total income before deductions and exemptions, they are substantially lower than the marginal rates, implicit in these averages, to which increments of income are subject.

Finally, effective rates for given income brackets represent averages on the incomes of families differing widely with respect to composition and size and hence with respect to tax liability.

Reflecting the impact of the Federal income tax, after-tax family income was 10 percent less than before-tax income, and its distribution differed noticeably from that of the before-tax aggregate. As can be seen from the accompanying tabulation, families with before-tax incomes below $6,000 in 1956 received 37 percent of the income total; those above $6,000, 63 percent of it. In terms of after-tax incomes—a closer approximation to consumer purchasing power—45 percent of the national total was accounted for by consumer units with less than $6,000, and 55 percent by units with more than that sum.

TABLE 4.—*Distribution of family income, before and after Federal income tax, 1956*

Family income [1]	Percentage distribution of—	
	Before-tax income	After-tax income
Under $2,000	2.8	3.5
$2,000 to $3,999	12.4	15.3
$4,000 to $5,999	21.5	26.2
$6,000 to $7,999	20.4	19.6
$8,000 to $9,999	12.0	10.5
$10,000 to $14,999	13.6	12.5
$15,000 and over	17.3	12.4
Total	100.0	100.0

[1] Represents income brackets before tax for the 1st column, and after tax for the second.

The contrast was particularly pronounced in the top ranges. Thus, in terms of before-tax income, families with $15,000 and over received 17 percent of the national total; those that remained in this income bracket after paying their income taxes accounted for only 12 percent of the national market in terms of after-tax purchasing power.

INCOME OF CONSUMER GROUPS

Additional features of the income structure of consumer markets are revealed by distinguishing among three broad groups of consumer units. The largest of these—nonfarm families—covers all units of two or more related persons other than the farm group. Numbering

38½ million in 1956, nonfarm families accounted for 73 percent of all consumer units. Farm operator families—those operating farms whether tenant or owner operators—totaled 5 million, or 9 percent. Included in this group are full-time farmers as well as families whose farming operations represent only secondary pursuits.

The third group of 9½ million unattached individuals, 18 percent of the total, consists of persons other than institutional residents not living with relatives. Included are persons living alone (or with nonrelated persons) in their own house or apartment, as well as lodgers and servants in private homes, lodging houses, and hotels.

The highest average income is found in the nonfarm family group. In 1956 personal income averaged $6,920 for these families, as compared with $4,035 for the farm-operator group (including their income from nonfarm as well as farm sources). The comparable average for unattached individuals was $2,800.

Reflecting this range in average income, there were substantial differences in the distributions by income brackets of the three groups of consumer units. As table 15 indicates, farm operator families and, in particular, unattached individuals, are much more heavily concentrated in the lower ranges of the income scale than nonfarm families. In 1956, for example, 43 percent of unattached individuals and 30 percent of farm operator families received personal incomes of less than $2,000, as compared with only 5 percent of nonfarm families. Also, only some 10 percent of the individuals and 25 percent of the farm group are estimated to have had incomes above $5,000, compared with over 60 percent of nonfarm families.

In an interpretation of the income distribution of the farm operator group, attention is called to the significant element of imputed income from food and housing that is included. Food produced and consumed by farm families is valued at farm prices, although for some purposes a retail valuation might be more appropriate. Valuation of imputed income at retail prices would decrease somewhat the proportions of farm operator families in the low-income brackets.

More broadly, the basic differences in the mode of living make meaningful income comparisons between farm and nonfarm families very difficult. In spite of the imputation of key items, many forms of income and production that arise within households escape measurement although similar items are taken into account if they are part of a market economy. Items thus omitted are relatively more important for farm than for urban families.

Also, the greater complexity of urban life calls for many unavoidable expenditures in the course of earning one's living which have no counterpart in the rural economy. On the other hand, the urban population has access to many types of consumption goods and services which are not easily available to farm families. For these and other reasons it is not possible to measure with any degree of precision differences in the level of living for farm and urban families. The conclusion that is most usually drawn, however, is that comparisons based upon the present income definitions tend to overstate the economic status of nonfarm families relative to that of farm families.

In connection with the large proportion of unattached individuals in the low income brackets, note should be taken of the understatement of actual economic status that occurs for consumer units that were in

existence for only part of the year and are listed at their part-year incomes. This type of downward bias in the income distributions affects multiperson family units also, but is believed to be relatively more important for unattached individuals.

More generally, it should be noted that even full-period low incomes in a particular year do not invariably signify inadequate levels of living. Living status is affected also by such factors as incomes earned in adjacent years by the same family unit, family requirements which vary with the size and composition of the unit, and the amount of capital resources available for supplementing current income receipts.

SOURCE PATTERNS

The income structure of the large nonfarm family group is examined further in table 3 which shows striking differences in the distribution of major types of income among family income brackets. Dividends and business income are concentrated most heavily in the income range above $10,000, wages and salaries in the middle income range between $4,000 and $10,000, and transfer payments in the range below $4,000. The high proportion of transfers flowing to families in low income brackets reflects the concentration in those brackets of aged couples living on pensions or old-age benefits and of families dependent on public assistance.

The figures are rearranged in the lower bank of table 12 to show the relative importance of the various types of income in the family income total for each income bracket. Wages and salaries represent the major income source in all income ranges, but they make a relatively smaller contribution to the income total in low and high family income brackets than in the middle income ranges. In the brackets between $4,000 and $10,000 wages and salaries comprised over four-fifths of total income in 1955; below $4,000 and above $10,000 they represented only three-fifths of the total.

Transfer payments were the most important supplementary income source below $4,000, accounting for one-fourth of total family income in that range. Business and professional incomes, and the various items of property income, were relatively most significant in the range above $10,000, each comprising one-fifth of the total in that bracket.

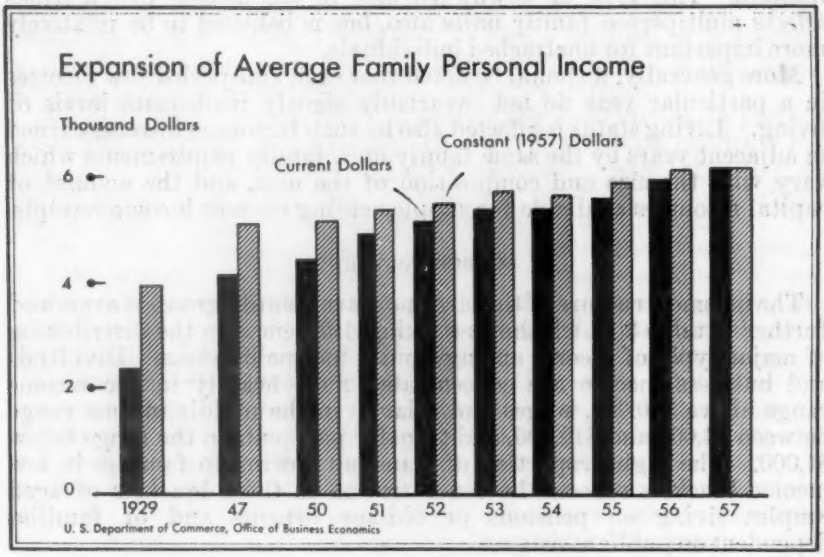
POSTWAR RISE IN FAMILY INCOME

The recent distribution of family income is the result of a process of growth that has characterized most of the postwar period. Total family income rose from $185 billion in 1947 to $328 billion 10 years later. With the number of families and single consumers increasing from 45 million to 53½ million over the same period, average before-tax income advanced, with only minor interruptions, from $4,130 in 1947 to $6,130 in 1957 (table 12). Income taxes accounted for about one-tenth of family income in most of these years.

Part of the income rise reflected the upward movement of prices. But there also occurred a substantial increase in real incomes. In terms of 1957 dollars, before-tax incomes averaged $1,000 higher in 1957 than 10 years earlier (see fig. 2); on an after-tax basis the increase was almost $900. These real increases represented an annual average rate of growth of 1¾ percent.

33034—58——3

FIGURE 2



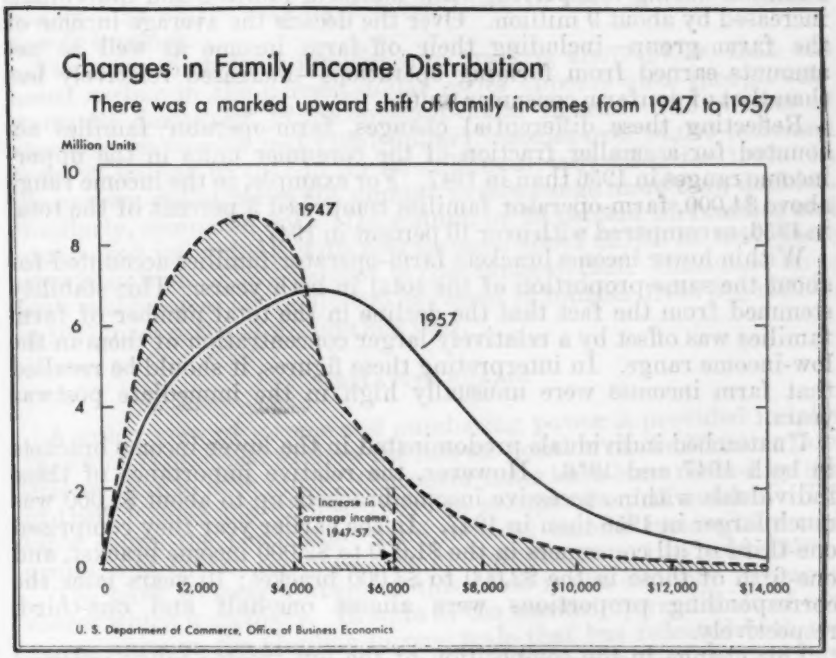
The postwar rate of growth has been somewhat higher than the long-term rate found for the entire period from 1929 to date. For before-tax incomes, the 1929–57 growth was 1½ percent per year, and for after-tax incomes it averaged 1¼ percent. The rise in income taxes that made for the lesser growth in after-tax incomes occurred mainly during World War II; in spite of some reductions in the postwar period, tax rates did not revert to their prewar levels as Federal expenditures remained relatively high.

As has been noted in connection with the discussion of the real gross national product, the high postwar rates of growth cannot be taken as evidence of a change in long-term trend. The retardation of normal economic development during the depression of the 1930's, and the pent-up demands that became effective after World War II, are important factors which may account for the differential rates of growth.

UPWARD INCOME SHIFT

The rise in average family income over the 1947 to 1957 decade was reflected in a marked upward shift of families along the income scale. This is illustrated in figure 3 which compares the income distribution of consumer units in current dollars for 1947 and 1957.

FIGURE 3



The chart shows a broad shift of the income distribution curve from the range below $4,000 on the left-hand side of the diagram to the higher income bands on the right-hand side. Reflecting expansion is economic activity, the rise in prices, and the increase in the total number of households, families with current-dollar incomes above $4,000 more than doubled between 1947 and 1957. In the earlier year there were some 16½ million consumer units in the range above $4,000; their number increased to 34 million last year. In contrast, units with incomes below $4,000 declined from 28 million in 1947 to 19½ million in 1957. In percentage terms, families and unattached individuals with income above $4,000 accounted for 37 percent of the total number in 1947 and 63 percent in 1957. (See table 9.)

The broad shift of families from income brackets below $4,000 to higher income ranges is mirrored in the distribution of their total income. In 1957 the 34 million consumer units that had incomes of more than $4,000 received about $280 billion of total income. This contrasted with $120 billion in that range received by 16½ million consumers in 1947.

Incomes of all three major component groups of consumer units did not increase proportionately over the postwar decade, and the relative importance of the groups in the total population also changed. As a result, the consumer composition of the various broad income ranges in recent years has differed substantially from that in 1947.

The total number of farm-operator families decreased by almost 1 million during this period, while nonfarm families and individuals increased by about 9 million. Over the decade the average income of the farm group—including their off-farm income as well as net amounts earned from farming operations—increased relatively less than that of nonfarm consumer units.

Reflecting these differential changes, farm-operator families accounted for a smaller fraction of the consumer units in the upper-income ranges in 1956 than in 1947. For example, in the income range above $4,000, farm-operator families comprised 5 percent of the total in 1956, as compared with over 10 percent in 1947.

Within lower income brackets farm-operator families accounted for about the same proportion of the total in both years. This stability stemmed from the fact that the decline in the total number of farm families was offset by a relatively larger concentration of them in the low-income range. In interpreting these figures, it should be recalled that farm incomes were unusually high in the immediate postwar years.

Unattached individuals predominated in the lower income brackets in both 1947 and 1956. However, the relative importance of these individuals within successive income brackets up to about $5,000 was much larger in 1956 than in 1947. In the earlier year they comprised one-third of all consumers in the $1,000 to $2,000 income bracket, and one-fifth of those in the $2,000 to $3,000 bracket; 10 years later the corresponding proportions were almost one-half and one-third, respectively.

This change in the composition of the low-income range reflected in part the slightly larger proportion that unattached individuals comprised of the total population in 1956 than in 1947. But the main reason for the change was the upward shift in incomes that took place over the decade. During a period in which current-dollar incomes increased on the average by almost one-half and relative income changes within the nonfarm sector were small, the composition of given income brackets that prevailed in the beginning of the period can be expected to shift to income brackets about 50 percent higher.

REAL INCOME RISE

For many purposes it is of interest to examine the changes in income size distribution that have taken place after the effect of the price rise has been eliminated, that is, to determine changes in the size distribution of real incomes. These can be derived only in rough fashion because separate indexes applicable to the various income brackets are not available. It is, therefore, necessary to use the same index throughout the income range even though all brackets may not have been affected by the price rise in the same way. Moreover, available price indexes which refer to consumer expenditures for goods and services must be applied to income totals that include income taxes and saving as well as outlays for consumption.

In table 13 an approximate conversion of the 1947 current-dollar distribution of families and unattached individuals into 1957 dollars has been made by applying to that distribution the price index used in deflating the personal consumption expenditure com-

ponent of gross national product. Differences between these 1947 deflated figures and the income distribution for 1957 reflect—approximately—the shifts that have taken place in real (constant-dollar) family incomes.

The upward shift of families into brackets above $4,000 that was noted earlier in the current-dollar series appears also, though substantially dampened, in the constant-dollar figures. The number of consumer units with real (1957-dollar) incomes over $4,000 increased from 23 million in 1947 to the 34 million already cited for 1957. In the current-dollar series the number in this range more than doubled. Similarly, compared with 11½ million or 26 percent of families and unattached individuals with real incomes above $6,000 in 1947, there were 20 million, or 38½ percent, in that range in 1957. Consumer units with real incomes above $10,000 increased in number from 3½ million in 1947 to more than 6 million last year.

RELATIVE SHARES

Another view of income and purchasing power is provided in table 14, which is designed to show the income position of the Nation's families relative to each other. Consumer units have been ranked by size of their income and divided into five groups of equal number. The table shows the percentage share of total income received by each group, and by the top 5 percent of consumers, in 1947 and 1956.

The most striking feature of this table is the stability in income shares which it displays. In spite of the marked upward shift of consumer units on the absolute income scale that has reflected both real growth and inflation, and in spite of all the other changes that have occurred in the American economy during the postwar years, the relative share of the various broad income groups in the total consumer market was much the same in 1956 as it had been in 1947. Moreover, the stability has held for all the years for which data are available—1947 and 1950–57—including, it may be noted, the recession year 1954.

As compared with 1947, only fractional changes in relative shares have occurred. Apparently there were small increases in the relative amounts of purchasing power received by the three middle groups and a correspondingly minor decrease for the top group. In absolute terms, the purchasing power of all groups increased substantially over this period.

PREWAR COMPARISON OF INCOME DISTRIBUTION

Because of deficiencies in the source data, income size distributions that are available for prewar years are not comparable in quality to those for the war and postwar periods. Moreover, significant comparisons between the postwar and some prewar data are impeded because it is difficult to allow for the effects of cyclical fluctuations, and for changes in the methods of accounting for income that have occurred over this period in part as a result of heavier income taxation.

Nevertheless, two bodies of data are available—Kuznets' series for upper income groups and a family income distribution based on the

Brookings study for 1929 [2]—which suggest strongly that the structure of consumer purchasing power was significantly different in the last period of prewar prosperity from that in the postwar decade. While precise measurement is not possible, these data indicate that the dispersion of family incomes was smaller in recent years than in 1929.

Families that comprised the lower and middle income groups received a larger proportion of total consumer income in the postwar period than did their counterparts in 1929. For the lowest 40 percent of units the relative income share was 16 percent in 1956 as compared with about 13 percent in 1929, and for each of the next two-fifths the gain was also in the order of 3 percentage points.

TABLE 5.—*Percentage of total family income by fifths of consumer units, 1929 and 1956*

Fifths of consumer units	Percentage of total family income	
	1929	1956
Lowest	13	5.0
2		11.3
3	14	16.5
4	19	22.3
Highest	54	44.9
Total	100	100.0
Top 5 percent	30	20.1

Correspondingly, the percentage share of the highest fifth of consumers decreased over this period, from 54 percent in 1929 to 45 percent in 1956. The decrease reflected the experience of the top 5 percent of consumer units. In absolute terms, of course, the income of the highest fifth rose along with that of other income groups.

The magnitude of the market shifts implied by these changes is brought out more clearly if we compare consumer purchasing power as it was actually distributed in 1956 with the distribution that would have prevailed had the 1929 relative patterns been in force. In 1956, the income of the top 5 percent of consumer units—those earning $13,500 and more—accounted for $63 billion. Had 1929 patterns prevailed, the income of this group would have aggregated about $30 billion more. About $12 billion of this difference accrued to consumer units comprising the lowest 40 percent of the population—those with incomes below $4,100. The remaining $18 billion was received by the next 40 percent.

[2] Simon Kuznets, Shares of Upper Income Groups in Income and Savings, National Bureau of Economic Research, New York, 1953; Maurice Leven et al., America's Capacity To Consume, Brookings Institution, Washington, 1934. The family income distribution for 1929 that underlies the present discussion represents the Brookings Institution estimates adjusted in several ways so as to make them as nearly comparable as possible, definitionally, with the OBE postwar series. The most important of the adjustments was to remove realized capital gains and losses which are not included in the postwar income distribution series. For a description of the adjustments, see Selma F. Goldsmith, Relation of Census Income Distribution Statistics to Other Income Data, in An Appraisal of the 1950 Census Income Data, Studies in Income and Wealth, vol. 23, Princeton University Press, for National Bureau of Economic Research, 1958.

INCREASE IN MIDDLE INCOMES

Since 1929 there has occurred a subtantial increase in the real purchasing power of incomes. Average family income (in terms of 1957 dollars) has risen from $3,940 in 1929 to $6,130 in 1957. This represented an increase of more than one-half in real before-tax income; for real after-tax income the rise was 40 percent. The corresponding average annual growth rates were 1½ percent and 1¼ percent, respectively.

This rise in real income, supplemented by the changes in the relative position of the various income groups that have just been summarized, has led to a very pronounced increase in the share of the total consumer market that consists of middle income families.

If—somewhat arbitrarily—we define this market as embracing consumer units that earned between $4,000 and $10,000 in terms of recent prices, we find in 1957 approximately 28 million consumer units in this range, whose incomes amounted to $176 billion. They accounted for about one-half of the number of families and also of the total income. In 1929, by contrast, about 8 million families—only one-fifth of the total—were correspondingly located on the real income scale. Their incomes (in terms of 1957 prices) amounted to $46 billion, or one-third of the total.

TABLE 6.—*Distribution of consumer units and total family income in 1957 dollars—1929 and 1957*

Family personal income in 1957 dollars (before income taxes)	Number of families and unattached individuals (millions)		Total family personal income in 1957 dollars (billions of dollars)	
	1929	1957	1929	1957
Under $2,000	12.4	7.3	13.4	8.5
$2,000 to $3,999	14.0	12.1	40.8	36.9
$4,000 to $5,999	5.1	13.6	24.6	67.4
$6,000 to $7,999	1.7	9.6	11.3	66.3
$8,000 to $9,999	1.2	4.8	10.2	42.6
$10,000 and over	1.7	6.1	41.5	106.5
Total	36.1	53.5	141.8	328.2

Putting the comparison in somewhat different terms, the number of middle income families, as defined here, was 3½ times as large in 1957 as in 1929, whereas the total number of families in the population increased by only 50 percent. The aggregate income of this group also increased relatively much more than total consumer income.

FACTORS IN MARKET SHIFT

The causes of this shift in the structure of consumer markets have not yet been fully analyzed. Growth in national productivity, which was the major factor underlying the increase in real income and purchasing power, has been discussed in an earlier chapter. The circumstances responsible for the shift in relative incomes are less easily distinguished. However, a few of them stand out fairly clearly.

The accompanying tabulation shows for 1929 and for the average of the postwar years, 1947–57, the percentage distribution of family personal income by types of income. The major feature of the table is

the relative decrease in dividends, rental income, and interest income on the one hand, and the increase in wages and salaries and transfer payments on the other. Inasmuch as the former types of income account for a relatively large proportion of the total income receipts of upper income groups, and the latter for those of lower and middle income groups (see discussion of income source patterns), the kind of change indicated by the table may be expected to account for at least part of the shift in the size distribution of consumer incomes and purchasing power that has been reviewed.

TABLE 7.—*Distribution of family income by types of income for 1929 and for 1947–57 average*

	Percent distribution—	
	1929	1947–57 average
Wages and salaries and other labor income	59.7	66.7
Transfer payments	1.6	5.3
Proprietors' income:		
Farm	7.1	5.7
Nonfarm	10.4	10.3
Dividends	6.9	3.7
Personal interest income	8.2	4.7
Rental income	6.1	3.6
Total family personal income	100.0	100.0

Many complex factors were in turn responsible for the change in the composition of personal income by income type. Higher corporate taxes and earnings retention seem to be the most important factors accounting for the reduced share of dividend disbursements. Rent control and monetary policies may have been responsible in part for reducing the relative importance of rental and interest incomes, respectively.

The increase in the share of transfer payments reflects the establishment and expansion of social-security programs and also the growth of pension and other payments to veterans. The importance of wages and salaries in the income total was bolstered by the rise in the compensation of Government employees accompanying the expanded level of Government operations which characterized the postwar period as compared with prewar.

Quite apart from these factors which affected the size distribution of consumer income by changing the composition of income by type, there appear to have been others that affected it by reducing the dispersion of individual types of income. The clearest evidence in this respect refers to the important wage and salary component which accounts for about two-thirds of the family income total.

Based on wage and salary data collected for detailed occupation and industry groups in the last 2 decennial population censuses, it has been found that 3 major developments have contributed to a narrowing of income differentials for wage and salary earners between 1939 and 1949: (*a*) decreases in relative income dispersion for men within practically all of the more than 100 occupations and industries that were

studied; (*b*) relatively greater gains in median wage and salary income for low-paid than for high-paid occupations and industries; and (*c*) an increase in the proportion of workers classified in occupations with comparatively little income dispersion.[3]

Although the interrelationships between the size distributions of individual types of income and the distribution of total family income are complex, it can be expected that a reduction of wage and salary differentials such as the one observed would be reflected in a reduction in income dispersion among families.

Similar data are not available for years other than 1939 and 1949. However, there is evidence that the reduction in wage and salary differentials holds also when the postwar decade as a whole is compared with 1929. An analysis of the average annual earnings of employees, which are available in considerable industry detail on a yearly basis for the period 1929 to date, indicates that the dispersion in these earnings was substantially smaller during the entire postwar decade than in the prewar period, most of the reduction having apparently occurred within the war years. This reduction in industry wage and salary differentials points to a simultaneous reduction in dispersion in the size distribution of wage and salary earnings, and thus broadens and extends the prewar-postwar wage comparison that has been made on the basis of the decennial census data.

Another development that is relevant to the subject matter is the changing role of the farm population in the economy, which has been discussed in earlier chapters of this volume. The number of farm operator families has decreased substantially over the period since 1929, and the incomes of these families—including off-farm earnings—have risen on the average somewhat more than those of the nonfarm group. Given the fact that average farm family incomes are much below those of nonfarm families, both of these developments are likely to have made a contribution—though not a substantial one—to the reduction in relative dispersion of family incomes.

FAMILY INCOME DURING NEXT DECADE

Estimates of the future growth of family incomes can be derived on the assumption that certain past trends and relationships will extend into the next decade. While such projections are believed to represent a reasonable portrayal of income growth, they should not be regarded as forecasts or predictions nor as precise figures applicable to particular years. They should be taken instead as orders of magnitudes that could be expected to prevail under conditions of generally full employment based on the extension of past trends.

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[3] Herman P. Miller, Income of the American People, New York, 1955, and Changes in the Industrial Distribution of Wages in the United States, 1939–49, in An Appraisal of the 1950 Census Income Data, Studies in Income and Wealth, vol. 23, Princeton University Press for National Bureau of Economic Research, 1958.

The accompanying tabulation shows estimates of the total and average personal income of nonfarm families in 1960, 1965, and 1970. The estimates were derived, and are presented, in terms of 1957 dollars.

TABLE 8.—*Nonfarm families: Total and average income* [1]

	Total family personal income (billions of 1957 dollars)	Number of nonfarm families (millions)	Average (mean) family personal income	
			1957 dollars	Index
1956	274	38.4	7,150	100
1960	310	41.0	7,600	106
1965	370	44.0	8,400	117
1970	445	48.0	9,300	130

[1] For assumptions underlying the projections, and for definitions, see text.

Nonfarm families are defined to include all families (i. e., units of two or more related persons living together) other than those containing a farm operator (as defined in the census of agriculture). Family personal income represents the current income, before income taxes, received from all sources, including wage and salary receipts, other labor income, proprietors' and rental income, dividends, personal interest income, and transfer payments. In addition to monetary income flows, family personal income includes certain nonmoney items such as wages in kind, the net imputed rental value of owner-occupied homes, and imputed interest. Total family personal income is a somewhat smaller amount in each year than the personal income aggregate from which it is derived, because it excludes the income received by institutional residents (including military personnel not living with their families), or retained by nonprofit institutions, private trust, pension and welfare funds.

FAMILY PERSONAL INCOME OF NONFARM FAMILIES

The basic assumption on which these estimates are based is that the forces which have served to expand our national economy in the past will continue to exert a similar influence in the future. Over the last 50 years the real gross national product has increased at an average annual rate of 3 percent, and the estimate simply that about this same rate of growth will prevail in the future.

After having projected the gross national product, the next step was to derive estimates of total personal income for each of the 3 years. This was done by extrapolating historical relationships between components of real personal income and gross national product. The national projected totals of personal income obtained in this way were found to coincide closely with estimates derived directly on the basis of a relationship between total personal income and total gross national product, and to accord also with long-term trends of per capita and per employee income.

The final step was to estimate how much of the projected totals of personal income would accrue to nonfarm families. These estimates were derived on the assumption that the same rate of growth in average (mean) family personal income would apply to all three major groups of consumer units for which distributions by size of personal

income have been prepared by the Office of Business Economics, namely, to farm operator families, nonfarm families, and unattached individuals. (It should be noted that the estimates of average income cover all types of personal income received, and thus include, for example, the incomes that farm operator families receive from nonfarm sources as well as their net income from farm operations.) Total personal income of nonfarm families was derived by multiplying the testimated average income of the group by the projected number of nonfarm families.

NUMBER OF NONFARM FAMILIES

The total number of nonfarm families in 1960, 1965, and 1970 was projected by subtracting the estimated number of farm operator families from Census Bureau projections (series B) of the total number of families. The farm-operator estimates were derived by extrapolating the number in 1957 by Census Bureau projections of the number of farm households (series B).

It should be pointed out that the total number of families is somewhat smaller than the number of households. The difference is due mainly to the fact that the term "family," as defined by the Census Bureau, refers to units of two or more related persons living together, whereas the term "household," as defined by that agency, includes "primary" individuals (i. e., heads of households not living with any relatives) as well as multiperson units. This is offset in small part by the inclusion in the total number of families of "secondary" families, i. e., families which do not include the head of the household (such as lodger and his wife) and therefore do not comprise separate households. As the accompanying tabulation indicates, the "secondary" family group is relatively very small.

	March 1957 (thousands)
Total number of households	49,543
Less: Primary individuals	6,333
Plus: Secondary families	235
Equals: Total number of families	43,445

INCOME SIZE DISTRIBUTIONS FOR NONFARM FAMILIES

The estimates of total and average income for 1960, 1965, and 1970 have been made here for nonfarm families rather than for nonfarm households, because it is the former group for which estimates of income size distribution have been developed for past years. The distribution of nonfarm families by size classes of personal income in 1956 is summarized later in this text in table 15, and comparable distributions for several earlier years will be shown in the report on United States income and output.

These distributions together with the projections of the total and average income of nonfarm families that have been described above, can be used as a basis for deriving projections of income size distribution for the next decade. The postwar stability in *relative* income distribution that has been discussed earlier provides the further basis for developing such estimates.

As was noted earlier, for each broad income group the *relative* share in total personal income was much the same in 1956 as it had been in 1947, despite the marked upward shift of consumers on the absolute income scale that took place during that decade. If the stability in relative shares is assumed to continue over the next decade, distributions of nonfarm families by personal income brackets can be projected from the 1956 figures (table 15) by shifting all income groups up the income scale by a constant proportion based on the corresponding percentage increase in *average* nonfarm family income as presented above. The actual procedures for carrying through such an extrapolation are outlined in the Supplement to the Survey of Current Business, Income Distribution in the United States by Size, 1944–50 (p. 38, f. 12).

Modifications in this procedure can be introduced if it is assumed that the *relative* shares of various income groups will vary over the decade. For example, if it is assumed that the percentage share of the lowest fifth of nonfarm families will increase, the projected number of nonfarm families in the lowest range of the family-income scale will be smaller than would be the case under an assumption of stability in relative income distribution.

TABLE 9.—*Distribution of consumer units and their income by family income level, 1947 and 1953–57*

Family personal income (before income taxes)	Number of families and unattached individuals (millions)						Family personal income (billions of dollars)					
	1947	1953	1954	1955	1956	1957	1947	1953	1954	1955	1956	1957
Under $2,000	11.1	8.5	9.0	8.2	7.6	7.3	13.2	9.9	10.5	9.6	8.9	8.5
$2,000 to $3,999	17.1	13.4	13.8	13.6	12.7	12.1	51.2	40.8	42.0	41.4	38.6	36.9
$4,000 to $5,999	9.2	13.3	13.1	13.5	13.5	13.6	44.5	65.8	65.1	66.9	67.0	67.4
$6,000 to $7,999	3.8	7.8	7.7	8.5	9.2	9.6	26.0	53.5	53.2	58.5	63.5	66.3
$8,000 to $9,999	1.5	3.4	3.3	3.6	4.3	4.8	13.3	29.8	29.1	32.2	37.7	42.6
$10,000 to $14,999	1.2	2.6	2.7	3.0	3.5	3.9	14.3	31.6	31.9	36.2	42.5	46.7
$15,000 and over	.8	1.5	1.6	1.8	2.0	2.2	22.1	40.8	42.2	47.1	54.1	59.8
Total	44.7	50.5	51.2	52.2	52.8	53.5	184.6	272.2	274.0	291.9	312.3	328.2
	Percent distribution											
Under $2,000	25	17	18	16	14	14	7	4	4	3	3	3
$2,000 to $3,999	38	27	27	26	24	23	28	15	15	14	12	11
$4,000 to $5,999	20	26	26	26	26	25	24	24	24	23	22	21
$6,000 to $7,999	9	15	15	16	17	18	14	19	19	20	20	20
$8,000 to $9,999	3	7	6	7	8	9	7	11	11	11	12	13
$10,000 to $14,999	3	5	5	6	7	7	8	12	12	13	14	14
$15,000 and over	2	3	3	3	4	4	12	15	15	16	17	18
Total	100	100	100	100	100	100	100	100	100	100	100	100

Source: Office of Business Economics, U. S. Department of Commerce.

TABLE 10.—*Distribution of consumer units, family income, and Federal individual income tax liability, by family income level, 1956*

Family personal income (before income taxes)	Number of families and unattached individuals (millions)	Family personal income (billions of dollars)	Federal individual income tax liability (billions of dollars)	Tax rate (percent)
Under $1,000	2.7	1.4	0	0
$1,000 to $1,999	5.0	7.5	.2	2.7
$2,000 to $2,999	5.9	14.7	.7	4.8
$3,000 to $3,999	6.8	23.9	1.4	5.7
$4,000 to $4,999	7.0	31.2	2.1	6.6
$5,000 to $5,999	6.5	35.8	2.8	7.8
$6,000 to $7,499	7.4	49.7	4.4	8.9
$7,500 to $9,999	6.0	51.5	4.7	9.1
$10,000 to $14,999	3.5	42.5	4.4	10.5
$15,000 and over	2.0	54.1	11.3	20.9
Total	52.8	312.3	32.0	10.2

Source: Office of Business Economics, U. S. Department of Commerce.

TABLE 11.—*Relative importance of major types of income by income level, nonfarm multiperson families, 1955*

Family personal income (before income taxes)	Nonfarm families	Total family personal income	Wages and salaries	Nonfarm business and professional income	Dividends and income from estate and trusts	Interest and rental income	Transfer payments and miscellaneous income
	Percent distribution						
Under $4,000	28.0	11.8	10.3	2.4	3.7	12.0	54.7
$4,000 to $5,999	30.4	23.1	26.0	13.9	6.3	19.7	19.2
$6,000 to $9,999	29.8	34.0	38.4	22.4	11.6	28.0	21.1
$10,000 and over	11.8	31.1	25.3	61.3	78.4	40.3	5.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Percent of total income						
Under $4,000	----	100.0	63.4	2.0	1.2	8.9	24.5
$4,000 to $5,999	----	100.0	81.3	5.9	1.0	7.4	4.4
$6,000 to $9,999	----	100.0	81.7	6.5	1.3	7.2	3.3
$10,000 and over	----	100.0	58.9	19.3	9.6	11.3	.9
Total	----	100.0	72.4	9.8	3.8	8.7	5.3

Source: Office of Business Economics, U. S. Department of Commerce.

TABLE 12.—*Average family personal income before and after Federal individual income tax liability*

Year	Number of families and unattached individuals (millions)	Average (mean) personal income per family and unattached individual			
		Before tax		After tax	
		In current dollars	In 1957 dollars [1]	In current dollars	In 1957 dollars [1]
1929	36.1	$2,340	$3,940	$2,320	$3,910
1947	44.7	4,130	5,120	3,720	4,610
1950	48.9	4,440	5,180	4,070	4,750
1951	49.5	4,900	5,360	4,420	4,830
1952	50.2	5,120	5,500	4,570	4,910
1953	50.5	5,390	5,720	4,810	5,100
1954	51.2	5,360	5,640	4,840	5,100
1955	52.2	5,600	5,870	5,050	5,290
1956	52.8	5,910	6,110	5,310	5,480
1957	53.5	6,130	6,130	5,480	5,480

[1] The price indexes used as deflators are those employed in deflating the personal consumption expenditure series in the national income accounts.

Source: Office of Business Economics, U. S. Department of Commerce.

TABLE 13.—*Distribution of consumer units by real income level, 1947 and 1957*

Family personal income in 1957 dollars (before income taxes)	Number of families and unattached individuals (millions)		Percent distribution	
	1957	1947 (in 1957 dollars)[1]	1957	1947 (in 1957 dollars)[1]
Under $2,000	7.3	8.0	14	18
$2,000 to $3,999	12.1	13.7	23	31
$4,000 to $5,999	13.6	11.5	25	25
$6,000 to $7,999	9.6	5.6	18	12
$8,000 to $9,999	4.8	2.5	9	6
$10,000 to $14,999	3.9	2.1	7	5
$15,000 and over	2.2	1.3	4	3
Total	53.5	44.7	100	100

[1] For limitations of the adjustment for price changes, see text.

Source: Office of Business Economics, Department of Commerce.

TABLE 14.—*Distribution of family personal income among fifths of consumer units, 1947 and 1956*

Fifths of consumer units	1947		1956	
	Income range	Percent of family personal income	Income range	Percent of family personal income
Lowest	Under $1,730	5.0	Under $2,510	5.0
2	$1,730 to $2,800	11.0	$2,510 to $4,120	11.3
3	$2,800 to $3,830	16.0	$4,120 to $5,660	16.5
4	$3,830 to $5,470	22.0	$5,660 to $7,790	22.3
Highest	$5,470 and over	46.0	$7,790 and over	44.9
Total		100.0		100.0
Top 5 percent	$9,560 and over	20.9	$13,490 and over	20.1

Source: Office of Business Economics, U. S. Department of Commerce.

TABLE 15.—*Distribution of nonfarm families, farm operator families, and unattached individuals, by income level, 1956*

Family personal income (before income taxes)	Number of consumer units (thousands)				Percent distribution			
	Total	Nonfarm families	Farm operator families	Unattached individuals	Total	Nonfarm families	Farm operator families	Unattached individuals
Under $1,000	2,688	433	462	1,794	5.1	1.1	9.3	19.0
$1,000 to $1,999	4,954	1,663	1,035	2,255	9.4	4.3	20.9	23.8
$2,000 to $2,999	5,871	2,891	939	2,041	11.1	7.5	18.9	21.6
$3,000 to $3,999	6,784	4,523	752	1,509	12.9	11.8	15.1	16.0
$4,000 to $4,999	6,941	5,554	538	849	13.2	14.5	10.9	9.0
$5,000 to $5,999	6,540	5,704	390	446	12.4	14.9	7.8	4.7
$6,000 to $7,499	7,416	6,806	347	263	14.0	17.7	7.0	2.8
$7,500 to $9,999	6,042	5,632	251	159	11.4	14.7	5.1	1.7
$10,000 to $14,999	3,545	3,307	160	78	6.7	8.6	3.2	.8
$15,000 and over	2,019	1,873	90	56	3.8	4.9	1.8	.6
Total	52,800	38,386	4,964	9,450	100.0	100.0	100.0	100.0

Source: U. S. Department of Commerce, Office of Business Economics, National Income Division.

B. Changes in Inventory of Dwelling Units

IMPORTANCE OF NET REPLACEMENTS IN HOUSEBUILDING DEMAND

SHERMAN J. MAISEL, Professor of Business Administration, University of California, Berkeley, Calif.

This paper was prepared in response to the following questions:

What is a reasonable estimate of the total number of substandard nonfarm housing units which will be occupied in 1960?

How many additional occupied nonfarm units will become substandard in the years 1961–70? How many substandard units will be made standard through repair or rehabilitation?

What is a reasonable estimate of the number of occupied nonfarm housing units which will be destroyed or demolished by fire, flood, windstorm, slum clearance, code enforcement, highway construction, and other causes in each of the years 1961–70? How many of these units will be substandard?

What is a reasonable estimate of the number of units which will be added to the inventory through conversions of existing structures? How many will be lost through mergers?

What is the total effect of the above factors in the demand for housing during the years 1961–70?

Summary

This paper discusses two rather distinct questions: By how much will the housebuilding industry's task be increased in the next decade as a result of nonconstruction changes in the housing inventory? Projecting present trends, what changes may be expected in the stock of substandard housing?

Subject to the assumptions and qualifications detailed in the body of this paper, I estimate that in the period 1961–70 the net loss from the nonfarm inventory requiring replacement will average about 125,000 dwelling units a year. In other words, new permanent construction for the next decade will have to be 1,250,000 units greater than the net increase in households and vacancies in order to replace those units lost from the inventory.

Assuming a level for urban renewal and public housing programs similar to that passed by the Senate in 1958 (i. e., a gross urban renewal program of about $6 billion for the decade), I estimate that the accumulation of nonfarm substandard housing as now defined and enumerated by the Census will fall from approximately 9 million in 1960 to 6 million in 1970.

These two computations differ radically from previous ones in this sphere. For example, the estimates of Wheaton and of Beyer

show an annual replacement requirement of from 600,000 to 900,000 per year.[1] How can this present calculation of requirements be 80 to 85 percent lower than these previous ones and yet arrive at a nearly similar result in terms of removal of substandard units? Basically, these differences arise because of the recent availability of better data through the Census' National Housing Inventory. The magnitudes also reflect somewhat different assumptions and the correction of some theoretical errors in the previous studies.

Because the divergences are so great, I shall explain them in detail in the following discussion. This will enable those who so desire to attack my premises, judgment, or reasoning, and thereby to arrive at separate conclusions.

Changes in the Nonfarm Housing Inventory

Clearly, the amount of new permanent construction required in any period can differ widely from the net additions to demand brought about by new households and by the changed level of desired vacancies. From 1940 to 1950, as an example, new construction accounted for less than 70 percent of the total additions to the nonfarm stock.

A wide variety of complex and hard to follow changes constantly alters our national quantity of dwellings. These changes include shifts from farm use; production of trailers, marginal or temporary units; conversions and mergers; demolitions and similar mutations. The forecaster interested in required construction must consider all of these possible variations. The following sections explain and suggest the magnitudes of these pressures on the housing inventory. They attempt to include all transformations except those brought about by permanent new construction.

ESTIMATES OF NONCONSTRUCTION INVENTORY CHANGES

Table 1 presents my estimate that, on the average, during the period 1940–50, these diverse sources annually added approximately 290,000 dwelling units to the nonfarm housing stock. For the decade, these 2,900,000 units accounted for 30 percent of the net inventory increase and equaled about 43 percent of permanent new construction. In contrast, from 1950 through 1956, 25,000 units a year were lost from the total stock. For this 6¾-year period, permanent new construction was 155,000 units (1.5 percent) larger than the calculated net growth of the inventory.

The projected change for the period 1961–70 on this same basis is a net loss of about 125,000 units a year. For the decade, new permanent construction of 1,250,000 dwellings will be required to replace the net exodus from the inventory created by these diverse forces.

MARGINS OF ERROR

I cannot overemphasize the statement that these figures are estimates. They derive from generally accepted data which contain unknown but potentially large errors. Basically they depend upon cer-

[1] W. L. C. Wheaton, American Housing Needs, 1955–70, The Housing Yearbook, 1954, National Housing Conference, Washington: G. H. Beyer, Housing: A Factual Analysis, Macmillan, New York, 1958; pp. 280–286.

tain estimates of the Bureaus of the Census and of Labor Statistics, the official Government agencies in this sphere.

The census enumerated an increase of about 9,700,000 in the nonfarm housing inventory between April 1940 and 1950. Similarly they estimated that between April 1950 and December 31, 1956, the farm and nonfarm inventory together rose by about 9,350,000 units. In this period, they calculated new production, which included permanent, temporary, marginal, and farm units, at 10,900,000 dwellings. Approximately 35,000 units were accumulated by the net effect of conversions and mergers. Finally, demolitions and similar forces removed about 1,600,000 dwellings. The Bureau of Labor Statistics estimated that for the census period 1940–50 approximately 5,775,000 new permanent nonfarm dwelling units were constructed, while in 1950–56 somewhat over 8,100,000 new permanent units were built.

TABLE 16.—*Additions and subtractions from the nonfarm housing supply, annual rates*

	1940–50	1950–56	1961–70
Estimated change in nonfarm inventory	+970,000	+1,460,000	
Net increase (+) or decrease (−) in nonfarm units from all sources except permanent construction:			
Change from farm to nonfarm	+90,000	+90,000	+40,000
Trailers, boats, tents, etc	+30,000	+45,000	+45,000
Seasonal, marginal, etc	+40,000	+45,000	+45,000
Temporary public housing	+60,000		
Net from conversions and mergers	+130,000	+5,000	+40,000
Net from demolitions and other changes	−60,000	−210,000	−295,000
Total from above sources	+290,000	−25,000	−125,000
Net increase in nonfarm inventory from permanent new construction	+680,000	+1,485,000	

Source: Derived from census totals of changes in the total inventory by the author.

Since these published estimates cover only a few of the many changes in the inventory, table 16 had to be constructed from a vast amount of diverse data, informal opinions, and expert judgments, (i. e., guesses).

The Bureau of the Census states that its estimates contain possible sampling variabilities ranging from a few percent for large numbers to 100 percent or more for small figures. In addition, errors may arise in enumeration, in shifting from a census to a survey, and in similar ways. The potential errors in census estimates of changes for this period cannot run less than 5 or 10 percent for the larger numbers and go beyond 100 percent for the smaller ones. When put in comparable terms to the census figures, the Bureau of Labor Statistics estimate for 1950-56 appears to be about 25 percent smaller. Either one or the other of these official estimates must be wrong by some major fraction of this total. The data for the period 1940–50 probably have similar errors.

Since table 16 contains numbers equivalent to the smaller census figures, but based upon even more fragmentary data, we should expect that the margins of error for its estimates of the past are at least as large as those in the census. The projections depend upon both the accuracy of the previous estimates and on their underlying assumptions. Clearly their errors may be sizable. The fact that the margins may be large need not, however, be very significant if the figures are

desired primarily for a projection of total housing requirements. Table 16 reveals that replacement requirements are very much lower than previous statements in this sphere have suggested. Even large margins of error would not invalidate this general conclusion.

TRANSFERS FROM FARM TO NONFARM USE

Table 16 indicates that over the past two decades the stock of nonfarm housing has increased at a rate of 90,000 dwelling units a year through the changeover of houses formerly occupied by farmers into residences of nonfarmers. This source of supply, while important, is partly a statistical illusion. Farmer Jones gives up farming to commute to a new factory nearby. The census simultaneously reports an increase of one in nonfarm families and an equal augmentation of the nonfarm housing stock. Since the reported gain in nonfarm families has put no strain on housing needs, it is a mistake, although one frequently made, to show ex-farmer Jones as requiring a nonfarm unit while neglecting the additional nonfarm house. This same principle applies even if the ex-farmer moves, provided that his formerly occupied house now contains a nonfarmer.

Unfortunately no official estimates exist for the number of units transferred from the farm to nonfarm supply. Between 1940 and 1950 the reported number of occupied units on farms fell by 1,400,000, partly because of a change in definitions and partly because of alterations in use. Apparently about two-thirds of this number had been added to the nonfarm inventory by 1950.

For the period 1950-56 there are no official estimates of the transfer from farm use or even of the division of the total inventory into farm and nonfarm units. Each of these figures must be estimated from noncomparable data of the census and the Department of Agriculture. The total number of farm dwellings apparently fell by about 500,000, the difference between the decrease of 900,000 in occupied farms and the increase in farm vacancies of 400,000. Were these units demolished or transferred to nonfarm use? We estimate that while some units were torn down, the number of new farm homes built during the period actually exceeded the number demolished by 100,000. Therefore, the total transfer to nonfarm use must equal this 100,000 difference between farm construction and destruction plus the apparent decrease in nonfarm units. This sum of 600,000 gives roughly the same rate of 90,000 annual transfers averaged in the previous decade.

No firm basis exists on which to project these transfers for the next decade. I have estimated that the rate will fall by more than 50 percent to 40,000 per year. Several factors make such a drop appear logical. Some of the previously reported changes were purely definitional. This problem should not arise again. Part of the trend from farms reflects the country's gain in prosperity following a severe depression. Moving to still higher national income levels will not create as great an impact as the original rebound from the great depression. Finally, the number of farms has already fallen sharply. Even if the same percentage decline in farms were to continue, it would mean a smaller actual number transferred to nonfarm use.

TRAILERS, SEASONAL, TEMPORARY, AND MARGINAL UNITS

Table 16 estimates that the many varied sources of new dwellings included in this subgroup added 130,000 units a year to the stock between 1940 and 1950. They contributed about 90,000 a year between 1950 and 1956, and are expected to continue increasing the stock at this rate.

A fairly significant number of families live in trailers, both those which can be pulled behind vehicles and those affixed more permanently to sites. Any increase in the occupied units of this type reduces by an equivalent number the requirements for other kinds of building. The Census estimated that about 300,000 households occupied trailers in 1950. The number in mobile units grew some 200,000 by 1957. The definition of trailers used for table 16 is wider than that of the Census, and therefore estimated additions from this source are larger.

Many dwellings are produced each year by amateurs, owner-builders, and similar groups. Most of these are properly included in the number of permanent dwelling units produced. They require equivalent materials and may draw on the same supplies of labor and financial resources. Other buildings, however, are small vacation or hunting lodges, temporary units (for example those erected for defense or construction workers), and marginal dwellings of inadequate materials, construction, or design (shacks). When occupied by nonfarm households these structures meet part of the housing demand, but they are not counted in the statistics on housebuilding.

The only firm figure in this class, in addition to mobile homes, is the knowledge that approximately 600,000 temporary war and veterans' public housing units were built in the 1940's. Otherwise, the total is an informed guess which can neither be proved nor disproved since the official data are lacking in definitions and concepts to cover these increases in the stock. I have projected the gains from these sources at their present levels. The number of additions originating in this manner has been well maintained for the past two decades. There is no obvious reason for expecting a change.

CONVERSIONS AND MERGERS

Existing houses can be split into additional dwelling units through conversions. These alterations may consist of structural changes, such as adding partitions, kitchens, and baths; but they may even more often be nonstructural, such as adding a hotplate, closing a door, or renting out a guest room. In the same manner existing units may be merged by removing partitions, hotplates, or most simply by leaving the guest room vacant.

A striving for greater independence has led to separate entrances for mother-in-laws, working teen-agers, and young married couples. These changes show as simultaneous shifts in the demand for and supply of nonfarm dwellings. The demand for construction of permanent units is not raised. Whether these and similar households are enumerated as primary instead of secondary and therefore are shown as requiring a separate dwelling unit may depend on irrelevant reasons, prominent among which may be enumerator bias.

As different families in turn experience similar life cycles, houses are at first enumerated as two converted units (both frequently substandard) and then are shown as remerged back to one. Even though as many as 250,000 separate dwelling units a year may be affected by these contrasting shifts, most conversions and mergers simply cancel out each other's effects.

Some conversions, however, are structural and permanent. During the war housing shortage many large marginal units were converted on a temporary basis for rentals to strangers. These accounted for part of the abnormal increase in this whole category during the 1940's. Their consequent merger back into larger and better units may account for the sharp drop in net units added through conversion in 1950–56.

The projection of a net gain in the next decade of 40,000 units per year from conversions and mergers appears conservative. The need will mount for units to house single-person households of both old and young. These, plus the normal pressures toward permanent conversions working within a larger housing inventory, should mean a considerable increase in this category. By 1960 most of the poorest conversions of the war period will have disappeared so that mergers will cause fewer losses from the inventory.

NET LOSSES THROUGH DEMOLITIONS AND OTHER CHANGES

Dwellings may be demolished as a result of public action, private desire to use land for another purpose, loss through fire, flood, and other casualty, or destruction because their value as a house has ended. Dwellings may be created from other space such as stores, garages, tourist courts, hotels, roominghouses, and so forth. A reverse movement may transfer dwelling units back into nondwelling space of these types.

Table 16 shows a Census estimate that net losses from these sources averaged 210,000 annually from 1950 through 1956. I have estimated that the losses averaged 60,000 between 1940 and 1950, and project a net loss of 295,000 during the coming decade. Table 17 contains an attempt to classify these data more completely. The table and the following discussion show projections which will vary radically depending upon the assumptions one uses as to public policy.

TABLE 17.—*Net losses through demolitions and other changes, annual rates*

	1950–56	1961–70
Total	−210,000	−295,000
From demolition of temporary public units	−50,000	−10,000
From clearance for public housing	−15,000	−10,000
From title I, urban renewal clearance	−5,000	−75,000
From highway clearances	−15,000	−58,000
From fire, flood, and other casualties	−20,000	−22,000
From all other sources, public and private	−105,000	−120,000

Source: The total for 1950–56 from tables 1 and 2, vol. 1, United States 1956 National Housing Inventory—subtotals estimated by author as explained in text.

Temporary public housing

In 1950, about 600,000 temporary public units remained from the war and veterans' housing programs. These units have since either been demolished at an estimated rate of 50,000 units a year or have

been turned over to local groups. One hundred thousand, or 10,000 per year, will remain to be pulled down in the next decade.

Clearance for public housing and urban renewal

Public housing and urban renewal are somewhat related. Both depend primarily on Federal subsidy programs. Some public housing requires site clearance. Some is built in redevelopment clearance areas. The estimated demolition of 85,000 units a year through these programs assumes a continuation for the next decade of programs of about existing size.

More specifically, I assume that public housing will build units on sites requiring demolitions of 10,000 units a year, while the gross purchase costs of urban clearance programs for land and structures will total $6 billion for the decade ($600 million per year). Under existing procedures, such a program would require a subsidy of about $480 million per year from Federal, State, and local sources.

This section also assumes that for each $8,000 of gross expenditures a dwelling unit will be demolished. This is close to the average estimated cost per unit cleared for the first 260 projects under title I of the Housing Act of 1949 and title III of the Housing Act of 1954.[2] If the costs of dwellings continue to rise through inflation, an equivalent monetary expansion of the program would be needed to meet this assumption.

Highway programs

Table 17 estimates that 15,000 units a year were cleared for highway programs in 1950–56 and that this number will rise to 58,000 a year in the next decade. Federal and State highway acts have recognized the seriousness of urban highway problems, with the result that an increasing percentage of growing highway expenditures purchase urban rights-of-way.

I assume that in the next decade $5 billion a year will be spent on normal highway programs, including the State highway systems, Federal aid, and programs for urban streets and extensions. An assumption that 40 percent of these total programs will go to urban areas, of which 20 percent will purchase rights-of-way, leads to an estimate of $400 million per year to be spent on urban rights-of-way.

In addition, $2½ billion a year will be spent on the Federal Interstate Highway program. The United States Bureau of Public Roads estimates that 11 percent of this total program, or $280 million a year, will purchase urban rights-of-way.[3]

How many dwelling units will be demolished as a result of the $680 million per year these 2 programs will spend on urban rights-of-way? If 70 percent of expenditures purchase residential land at an estimated average cost of $8,200 per dwelling unit, based on the national housing inventory of 1956, this sum will clear approximately 58,000 units a year.

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[2] HHFA Urban Renewal Project Characteristics, December 21, 1957.

[3] The basis of these estimates may be found in the following public documents:
Needs of the Highway Systems, 1955–84, letter from Secretary of Commerce, H. Doc. 120, 84th Cong., 1st sess., pp. 6–7, 13.
A Report of Factors for Use in Apportioning Funds for the National System of Interstate and Defense Highways, letter from Secretary of Commerce, H. Doc. 300, 85th Cong., 2d sess., pp. 5–7.
Federal-Aid Highway Act of 1958, hearings before a subcommittee of the Committee on Public Works, U. S. Senate, 85th Cong., 2d sess., pp. 116–118.
Highway Statistics, Summary to 1955, 1955, 1956, U. S. Department of Commerce, Bureau of Public Roads.

Some may object strongly to my assumption that annual expenditures for highways will be nearly twice as high as the whole decade's expenditures on urban renewal. That, of course, is part of the reason for the hearings for which this paper was requested. If the urban-renewal program becomes one-twentieth as large as the total highway program, it will have made great gains compared to this decade.

Fires, floods, casualties, and miscellaneous losses

After subtracting out the previous sources of demolitions, 125,000 units a year of the national housing inventory estimate remain to be accounted for by all other reasons. The only knowledge of trends in this catchall category is a guess by fire-prevention people that fires and floods cause losses of about 20,000 units per year. Table 17 projects an increase of 10 to 15 percent in losses from all these miscellaneous causes. In effect, this assumes that the losses will rise at about the same rate as the increase in the total inventory.

The Problem of Substandard Units

Making an accurate statistical projection of substandard dwelling units in the United States nonfarm inventory is an impossibility. Even though the United States has supposedly had a national housing policy, annual estimates of needs, and widesperad programs of renewal and clearance, some going back over 20 years, few have bothered to define "substandard," and none have attempted to count the real substandard units in the Nation. As a result, estimates of nonfarm substandard units vary from about 9 million (Census) to 25 million (ACTION).

A substandard unit should probably be defined as one which fails to meet the minimum conditions prescribed under an adequate housing and building code. For example, a typical housing code defines as substandard "any dwelling unit or structure in which any of the following conditions exist to an extent that endangers the life, limb, health, property, safety, or welfare of the public or the occupants thereof." It then lists over 40 specific faults which might lead to such a finding. Other definitions extend beyond the specific unit, and list dwellings as substandard because of a poor environment.

A fairly thorough search for counts of substandard units based on some sound definition failed to turn up any extending beyond small localities. As a result, for national discussion, one must fall back on the Census figures. The Census defines as dilapidated a unit which has "serious deficiencies, is rundown or neglected, or was of inadequate original construction so that it does not provide adequate shelter or protection against the elements or endangers the safety of the occupants." The Census also reports on whether or not units had "private toilet and bath and hot running water."

It has become common to define as substandard those units which were enumerated as either dilapidated or lacking plumbing facilities, or both. In 1950, 70 percent of the nonfarm inventory was reported to be standard; 22 percent was not dilapidated but lacked one or more plumbing facilities, while 8 percent was dilapidated. Most of this latter group also lacked plumbing. These data give no clue to how

many of these units could easily be brought up to standard or how many other units might be substandard on some other scale.

THE 1950–56 EXPERIENCE

Table 18 gives some indication of what happened to the substandard units in the 1950 housing inventory as a result of repairs, renewal, demolitions, and conversions in the following 6¾ years. The table shows both the total inventory as well as a breakdown between those units inside and outside of standard metropolitan areas. Such a division is shown because we have no current data on farms or other rural units. It is necessary to compare changes inside and outside metropolitan areas in order to estimate how much of the total change occurred in nonfarm and how much in farm units. It is quite clear that plumbing as the primary criterion for standardness is not completely valid for rural units. Yet over 60 percent of the total units lacking plumbing in 1950 were in these rural areas.

The data for all units show some 16,400,000 listed as substandard in 1950. Of these, 11,695,000 were nonfarm dwellings while the remainder were on farms. Repairs and rehabilitation far exceeded deterioration among this substandard group. Over 3 million units previously shown as substandard (more than 20 percent) were enumerated as standard in 1956. At the same time, conversions, mergers, or demolitions caused 1,567,000 (10 percent) of the original substandard group to disappear from the inventory. While some substandard dwellings were constructed, the net effect of time was to reduce the number of substandard units to 12,629,000 by December 1956.

TABLE 18.—*1950–56 changes in condition of the housing inventory*

TOTAL FOR UNITED STATES

[In thousands]

Condition	1950 units	Change in 1950 inventory				1950 inventory in 1956	New construction	1956 inventory
		Change in same units	Net conversions and mergers	Net other losses	Total			
Standard	28,102	+2,754	+391	−143	+3,002	31,104	9,649	40,753
Substandard	16,400	−3,187	−299	−1,268	−4,754	11,646	983	12,629
Not reported	1,481	+433	−56	−190	+187	1,668	288	1,956
Total	45,983		+36	−1,601	−1,565	44,418	10,920	55,338
INSIDE STANDARD METROPOLITAN AREAS								
Standard	19,314	+1,110	+272	−206	+1,176	20,490	6,389	26,879
Substandard	5,565	−1,099	−178	−517	−1,794	3,771	257	4,028
Not reported	747	−11	−32	−121	−164	583	117	700
Total	25,626		+62	−844	−782	24,844	6,763	31,607
OUTSIDE STANDARD METROPOLITAN AREAS								
Standard	8,788	+1,644	+119	+63	+1,826	10,614	3,260	13,874
Substandard	10,835	−2,088	−121	−751	−2,960	7,875	726	8,593
Not reported	734	+444	−24	−69	+351	1,085	171	1,256
Total	20,357		−26	−757	−783	19,574	4,157	23,723

Source: Tables 7 and 22, vol. 1, 1950 Census of Housing, and tables 1, 2, and 4, vol. 1, 1956 National Housing Inventory.

The data for dwellings inside standard metropolitan areas show that, while a much smaller percentage of these units were substandard at the start, their rate of improvement exceeded that of the total inventory. This leads me to believe that the nonfarm inventory probably also improved at least as much as the total. Consequently, I estimate that on December 31, 1956, there were about 1,700,000 fewer substandard nonfarm units, or that approximately 10 million (20 percent) of the nonfarm units were still classified as substandard by the Census. Since similar conditions still appear to prevail, a total of about 9 million substandard nonfarm units is likely to exist at the time of the 1960 census.

CHANGES IN SUBSTANDARD UNITS, 1960–70

What will happen to the number of substandard units during the next decade, under our previous assumptions as to the size of the renewal, public housing, and highway programs? During recent periods, the loss in substandard units has run about 90 percent of total losses from demolitions and similar changes. This ratio may well continue. On this assumption, about 260,000 substandard units per year will be demolished, or a total of 2,600,000 for the decade.

What about the effect of other potential changes? Particularly, what is the net impact of deterioration and depreciation plus poor construction likely to be compared to rehabilitation and renewal? Some groups have estimated that these forces will increase the number of substandard units at the rate of a million a year. On the other hand, we have seen that from 1950 to 1956 their total impact was to transfer units back to the standard classification at a rate of over 300,000 per year.

My own guess is that, during the next decade, these conflicting forces will have a slight—but very slight—tendency to reduce the substandard inventory. I am not convinced that time alone is likely to cause many units to become substandard. On the contrary, I reject as absurd the frequent attempts to list all units over a certain age and to say that these will become substandard through 10 years' further aging. Our civilization's entire experience with old houses proves the contrary. Deterioration is a function of design and maintenance, not of age. I feel, too, that greater emphasis on the enforcement of housing and building codes will lead to increased rehabilitation of existing substandard units. It is this pressure which will more than offset the ravages of time.

These assumptions as to a standstill in the deterioration of the stock remaining through 1970 lead to the projection that, on the basis of a gross urban-renewal program of $6 billion for the decade, the country will in 1970 have about 6 million remaining substandard units in the nonfarm inventory.

AN EXPANDED PROGRAM

Any attempt to guess the number of these 6 million units which could be rehabilitated, to estimate how many should remain classified as substandard because their faults do not really require a change (i. e., rural units, converted units within families, etc.), or how many might properly be the subject of an expanded clearance program would be simply plucking a number from thin air. Assuming that the commit-

tee desires such a figure as a basis for potential consideration of a maximum clearance program, I would select the range of 1 million to 2 million units as the number of substandard units which might properly be pulled down.

In effect, I guess that, if a national policy were adopted to clear out almost all substandard units logically subject to such a program, the number of units which would have to be demolished would be from 30 to 60 percent higher than the 295,000 units considered likely under existing marketing pressures and public policy. If this increased demolition were to be brought about primarily through an expansion of existing Federal programs, they would have to expand to be 2 or 3 times as large as the program the Senate voted last session.

The conclusions of this paper are startling only when compared to previous estimates of replacement requirements of 500,000 to 1 million per year and statements that there are now 25 million substandard units, with an additional 1 million becoming substandard per year. Instead, it appears as if net replacement requirements over the past few years have played a relatively mild part in creating a demand for housebuilding. With the exception of Government programs for urban clearance and highways, there is no obvious reason why this situation should change.

It is an inability to find any dramatic shifts in the underlying situation which leads to an estimate of little or no added impact from the forces outside the public sphere. At the same time, however, I do assume that the public will demand adequate highway and urban-renewal programs. Their net effect under our previous assumptions will raise replacement demand by slightly over 100,000 units. In terms of existing markets, this would raise the total demand for housebuilding by somewhat under 10 percent.

Programs of our assumed size would probably cut into the present accumulation of substandard units. Whether or not the decline in these units would or would not be adequate is primarily a political question. It is much more a problem of social objectives than of economic costs. For even a large-scale expansion of the clearance program would be such a small part of the total building picture that any adjustments necessary because of added demand should be well within the normal limits of the industry's structure and operations.

SUBSTANDARD DWELLING UNITS AND THEIR REPLACEMENT, 1961–70

REINHOLD P. WOLFF, Director, Bureau of Business and Economic Research, University of Miami, Coral Gables, Fla.

This paper was prepared in response to the following questions:

What is a reasonable estimate of the total number of substandard nonfarm housing units which will be occupied in 1960?

How many additional occupied nonfarm units will become substandard in the years 1961–70? How many substandard units will be made standard through repair or rehabilitation?

What is a reasonable estimate of the number of occupied nonfarm housing units which will be destroyed or demolished by fire, flood, windstorm, slum clearance, code enforcement, highway construction, and other causes in each of the years 1961–70? How many of these units will be substandard?

What is a reasonable estimate of the number of units which will be added to the inventory through conversions of existing structures? How many will be lost through mergers?

What is the total effect of the above factors in the demand for housing during the years 1961–70?

Introduction

At the end of the depression of the 1930's substandard housing represented nearly half of the total housing stock of the Nation. The replacement demand for obsolete housing, plus the needs of a rapidly increasing population, seemed to exceed by a wide margin the reasonable part of the national resources that could be allocated to shelter needs. Today, the situation is radically changed. As we look toward the housing task of the 1960's we can say that the problem of replacing substandard units has been reduced to manageable proportions. While still major portions of our farm housing and of the vacant inventory will fall into the substandard category, the nonfarm occupied housing will have less than one-seventh of its dwelling units in the substandard class. To substantially reduce the substandard portion of nonfarm households—a total of 7 million units—and to improve the still deficient farm housing stock is a task that we should be able to fulfill in the decade ahead without major strain on national resources or fiscal revenues. Again, as in the past two decades, the reduction of substandard housing will for the major part occur through repair and rehabilitation rather than through demolitions and removals, but there is good reason to assume that replacement demand will be increased over the rate of the past two decades.

Definitions

1. Substandard inventory

In accordance with the 1950 United States census of housing, substandard dwelling units include all dilapidated units plus nondilapidated units lacking sanitary facilities, i. e., inside flush toilet, private bath, or hot running water. Note, however, that 1940 census data did not distinguish between hot and cold running water in tabulating sanitary facilities; also, dilapidation was differently defined. (These factors probably resulted in an understatement of substandard conditions for 1940.)

2. Demolitions

Units demolished or razed on the initiative of a public agency or owner. The term "demolitions" does not include units involuntarily demolished by fire, flood, windstorm, or other catastrophe.

3. Other causes and other sources

Units lost due to "other causes" and units added from "other sources" include the following types of change:

(*a*) Units lost by a "merger" type of change which converted residential space to nonresidential space (including change to roominghouses).

(*b*) Units added by conversion from nonresidential space to residential space (including changes from roominghouses to dwelling units).

(*c*) Units moved from their original site (both losses and additions).

(*d*) Units lost through abandonment or destruction by fire, flood, windstorm, etc.

4. Units changed by "merger"

Mergers are the combining of two or more dwelling units into fewer dwelling units. This does not include any of the changes from residential use to nonresidential use described under "Units Lost Through Other Causes."

5. Units changed by conversions

Creation of two or more dwelling units from fewer units through structural alterations or change in use. This does not include the types of conversion listed under "Other Sources" where units were created from nonresidential space.[1]

Part I. Forecast of Substandard Housing Inventory, December 31, 1960

1. History of the substandard inventory

The substandard housing inventory of the census of 1940 showed approximately 18 million units, representing nearly half of the total housing stock. Because of changes of definitions in the substandard category, the 1950 substandard inventory of about 17 million units is not strictly comparable to 1940, but a decreasing trend in total numbers of substandard units—both dilapidated dwellings and those which lack

[1] For more detailed definitions of the various components of changes than shown here, see the 1956 National Housing Inventory (NHI). Although not all volumes have been released, definitions have been repeated in various releases such as components of change for the individual metropolitan areas.

major sanitary facilities, such as indoor toilet, bath, and hot water—is evident. The National Housing Inventory taken at the end of 1956 showed a major reduction in the number of deficient units between 1950 and 1956. Still, 13 million units were found in the substandard category, but they represented less than one-quarter of the total housing stock.

TABLE 19.—*Total United States housing stock and substandard inventory, 1940, 1950, 1956, and 1960*

[1,000 units]

Year	Total housing stock	Substandard inventory	Percent substandard of total inventory
1940	37,325	18,364	49.2
1950	45,983	16,944	36.8
1956	55,341	13,092	23.7
1960 (estimated)	60,000	11,501	19.2

2. Outlook for 1960

In view of the fact that since 1956 substandard dwelling units were not inventoried, we must base our estimate of present conditions and those likely to exist at the beginning of the 1960–70 decade on a prediction. The 1950–56 trend has been used to make these predictions as portrayed in table 1.

3. Components of change, 1950–56

An analysis of the changes in component parts of substandard units for the period 1950 to 1956 will allow a fairly accurate forecast of the various components, both of increases and decreases to 1960. From the table below it appears that the net changes in the substandard inventory result from elements which are both increasing and decreasing the number of deficient units.

TABLE 20.—*Components of changes in the United States inventory of substandard housing, 1950–56*

[1,000 units]

	Increase	Decrease	Net effects on substandard inventory
Total of components in changes	3,508	7,360	−3,852
Substandard units rehabilitated, and now standard		4,538	−4,538
Standard units lapsed to substandard	1,431		+1,431
New construction	1,010		+1,010
Demolitions		816	−816
Conversions	444	152	+292
Mergers	188	816	−628
Other causes and other sources	435	1,038	−603

(*a*) *Rehabilitation.*—By far the largest factor in diminishing substandard dwellings has been in the past, and will be in the future, the repair and rehabilitation of existing substandard dwellings. During the period between 1950 and 1956 over 4½ million units were rehabilitated. Better than four-fifths of this rehabilitation consisted of the addition of sanitary facilities, such as hot water, bath, and

toilet, which the units had formerly lacked, and only one-fifth was due to repair of dilapidated units. (See appendix table 44.)

We may expect that this movement will continue at the same rate until 1960, and that more than 2 million units will have been rehabilitated by the end of 1960.

TABLE 21.—*Projected components of change in the United States inventory of substandard housing, 1956–60*

[1,000 units]

Components	*Net effects on substandard inventory*
Total of components in changes	−1,591
Substandard units to be rehabilitated	−2,085
Standard units which will become substandard	848
New construction	500
Demolitions	−484
Conversions	172
Mergers	−186
Other causes and other sources	−356

(*b*) *Demolitions and removals.*—Demolitions are often believed to be the primary means of improving the housing inventory, but they have proceeded at a much smaller rate than rehabilitation and repair. Between 1950 and 1956 approximately 800,000 substandard units were removed by demolition. Contrary to widespread belief the ratio of demolitions is neither substantiated by the need of withdrawal of old units from the housing inventory nor by the rate at which slum clearance and urban renewal take place. As table 20 reveals, demolitions were relatively more numerous on older houses than on newer ones, but only by a small margin. The total number of demolitions in the 10-year period did not even equal 1 percent of the housing stock built before 1919, and the annual rate of demolitions is less than 1 percent of the total housing stock per year. As table 39 suggests, urban-renewal programs between 1950 and 1957 have contained less than 115,000 total dwelling units, and some of the affected units were not of substandard character.

The major causes for demolitions have been changes in land uses, such as the spread of business and industrial activities in the residential areas of cities, the demolition of small houses to make room for large apartment houses, the destructions necessitated by road-building and street widening, and similar activities.

It can be assumed that the second half of the decade will continue these programs at approximately the same rate as they were carried between 1950 and 1956, and with an equal effect on the removal of substandard units.

Of equal importance to losses in the substandard dwelling inventory are removals and changes for other causes. Between 1950 and 1956, 955,000 units were removed. This category includes buildings that were moved from the site without being demolished, dwelling units transformed into business units, losses by fire, windstorm, flood, and similar nonvoluntary destructions, and complete decay by abandonment of the structure. Since in many cases dwelling units were also added, for instance, by using former business structures as residential units, the net decrease was only 540,000 units, and can be assumed to

be 356,000 units between 1956 and 1960. Mergers will take another 186,000 units away from the substandard 1956 housing stock.

(*c*) *Dilapidation.*—The substandard inventory of 1956 will still be increased by 2 major and 1 minor item. In the first place, some of the existing units will become substandard by dilapidation or loss of facilities, thus adding more than 800,000 units to the substandard inventory between 1956 and 1960. Because of better practices of maintenance, stimulation of home repairs under title I of the National Housing Act, and curtailment of the total substandard inventory, this number—about 200,000 a year—is considerably reduced from former rates of dilapidation, but is still a factor in slowing down the rehabilitation of total housing stock.

Regrettably, still 9 percent of new construction is of such low quality as to bring the units under the category of dilapidation, or lack of major facilities. It can be assumed that much of this substandard building is taking place in areas which lack adequate building codes, subdivision control, community facilities, and the like. Even in central cities where usually stricter forms of control prevail than on the outskirts and in the rural areas, some building is still going on which creates substandard units.

(*d*) *Conversions.*—A minor addition to deficient housing will spring from conversions. Typical instances are old houses that are divided into smaller dwelling units, or conversions of parts of a building into separate dwelling units. Due to lack of sanitary facilities in makeshift dwellings this activity is likely to produce a relatively large number of substandard units, as was shown in the 1956 national housing inventory. However, the total effect of such conversions is expected to be minor on the 1960 stock of deficient housing.

As a result of the various factors described above the substandard inventory will be reduced by 1.6 million between 1956 and 1960. This is a much smaller reduction than occurred between 1950 and 1956, but as the quality of total housing is improving, the reduction factor of deficient housing is naturally becoming smaller.

(*e*) *Vacant and farm.*—The National Housing Inventory found 19.9 percent of substandard housing in the vacant category. According to census reports, vacancies in the past few years have varied from 9.7 to 10 percent of the total housing inventory. Assuming that the rate will be 9.9 percent in 1960 we will have then approximately 6 million vacant units. It is estimated that a decreasing proportion, roughly 20 percent, will be substandard. After deduction of some substandard vacant farm units this will leave some 1,400,000 units in the substandard nonfarm inventory of 1960. (See appendix table 41.)

The Decennial Housing Census of 1950 found 74 percent of farm housing substandard. Nearly 5 million substandard units of the 1950 housing inventory, or about 30 percent of the deficient housing was, therefore, accounted by farm housing. In the meantime, many farmhouses had become parts of nonfarm areas, especially in metropolitan areas; in fact, some of the increase factors of metropolitan substandard housing are explained by the inclusion of already deficient farm housing in their orbit. We may assume that in 1960 roughly 3 million farmhouses will be substandard.

TABLE 22.—*Substandard farm housing, by classification, 1940, 1950, and 1960 (estimated)*

[1,000 units]

	1940	1950	1960
Total farm units	7,642	6,358	5,100
Nondilapidated, lacking facilities	4,319	3,637	2,550
Dilapidated	2,593	1,338	510
Total substandard	6,912	4,974	3,060

4. Status of occupied nonfarm housing inventory

It thus appears that major portions of the deficient inventory of 1960 will be in farm housing and in nonoccupied dwelling units, and the substandard inventory of 1960 in occupied nonfarm housing will be reduced to roughly 7 million units, which will constitute one-seventh of the nonfarm households.

TABLE 23.—*Nonfarm occupied substandard dwelling units in the 1960 inventory*

[1,000 units]

Total U. S. substandard units		11,501
Substandard farm units	3,060	
Substandard vacant units nonfarm	1,400	
Total substandard farm and vacant		4,460
Net, nonfarm occupied substandard units		7,041

5. Geographical distribution of deficient housing inventory—1960

The geographical distribution of the substandard housing inventory supplies important clues for the trend that may be expected to govern the future changes in deficient housing.

With respect to substandard units, the National Housing Inventory of 1956 did not differentiate between farm and nonfarm areas, but it showed the development of substandard housing as between metropolitan areas and housing outside metropolitan areas. It also throws light on the position of central cities and their deficient housing. The figures of the NHI become more meaningful if compared with the distribution of substandard housing in 1950.

It happens that in 1956 a much higher number of substandard units, both absolute and relative, was found outside standard metropolitan areas (SMA's) than inside. Of the 13 million units found substandard, nearly 70 percent were found outside SMA's. (See appendix table 42.)

Also the rate of units lapsing into substandard status between 1950 and 1956 was higher for areas outside SMA's as for those inside. On the basis of these developments we may assume that by 1960 better than two-thirds of the deficient inventory will lie outside the metropolitan areas. The NHI also revealed the fact that central cities of metropolitan districts do not account for the major share in the substandard housing inventory, but only for one-sixth of all substandard units.

TABLE 24.—*Substandard dwelling units rehabilitated versus standard units lapsing to substandard, inside versus outside metropolitan areas*

[1,000 units]

	Inside metropolitan areas		Outside metropolitan areas	
	Number of units	Percent	Number of units	Percent
Total units, 1950	25,625		20,358	
Units substandard, 1950	6,030	100.0	10,914	100.0
Substandard units, rehabilitated, 1950–56	2,240	37.2	2,298	21.0
Units standard, 1950	19,595	100.0	9,444	100.0
Standard units lapsing to substandard, 1950–56	860	4.4	671	7.1

A large amount of substandard dwelling units was concentrated in the South, when the last decennial census was taken. Since the South still holds a large proportion of the Nation's farms and also a large nonwhite population—both sources of concentrated substandard housing—we may assume that this will still be so in 1960.

TABLE 25.—*Substandard dwelling units by regions, 1950*

[1,000 units]

	Northeast	North Central	South	West
Total dwelling units	12,051	13,746	13,654	6,533
Dwelling units substandard	2,189	4,850	7,053	1,361
Percent substandard	18.2	35.3	51.7	20.8

6. Racial distribution of households in substandard dwellings

The NHI has not yet revealed to what extent minority housing has been affected by the reduction in substandard units. From the 1950 census it is, however, evident that nonwhite housing, while it has a higher percentage rate of substandard units than white housing, is not responsible for the bulk of such housing.

TABLE 26.—*Occupied substandard housing by color of occupant, 1950*

[1,000 units]

	White	Nonwhite
Total dwelling units	39,044	3,783
Total substandard	15,164	2,768

7. Owned versus rented units

A great deal of the substandard inventory is in renter occupied units, especially apartments, and these units will also present the major problem of rehabilitation and replacement in the future. At the outset it should be noted that the housing inventory of 1956 showed nearly double as many units as owner occupied than renter occupied.

TABLE 27.—*Percent of occupied dwellings which are owner-occupied, 1940, 1950, and 1956*

[1,000 units]

	Total occupied dwellings	Owner-occupied dwellings	Percent of occupied dwellings occupied by owner
1940	34,865	15,196	43.6
1950	42,826	23,600	55.0
1956	49,873	30,120	60.4

Although the quantity of substandard units in the owner-occupied group nearly equaled those in the renter-occupied group, the proportion was much greater in the rental units—namely, 28 percent—as compared to the 16-percent rate of owner-occupied inventory.

TABLE 28.—*Substandard dwelling units by tenure, 1956*

[1,000 units]

	Owner-occupied	Renter-occupied	Vacant
Total dwelling units	30,120	19,753	5,468
Dwelling units substandard	4,898	5,590	2,604
Percent of units substandard	16.3	28.3	47.6

As table 29 suggests, a larger percentage of owner-occupied units (34.7 percent) was rehabilitated than renter units (25.7 percent) between 1950 and 1956 and a smaller amount of standard units in the owner-occupied group (4 percent) lapsed into substandard status during the same period than in the renter group (7 percent).

TABLE 29.—*Status change of owner versus renter-occupied dwellings, 1950–56—Relative ratios*

	Percent of substandard units rehabilitated and repaired	Percent of standard units which have become substandard
All occupied units	31.6	5.4
Owner-occupied	34.7	4.3
Renter-occupied	25.7	7.0

PART II. FORECAST OF CHANGES IN SUBSTANDARD INVENTORY, 1961–70

1. The major factors affecting substandard units

In attempting to forecast the development of substandard housing from 1960 to 1970, we somewhat remove ourselves from reality of recent data and move into the realm of speculation of future variables. Developments until 1960 can be predicted with some degree of accuracy because we have already passed through half the phase that is remaining after the National Housing Inventory established a firm base for estimates in 1956. What is going to happen after 1960 will depend on many variables, over some of which national policy will

have control, while others will be determined by extraneous factors. We have, however, somewhat of a basis for predictions from the fact that certain trends in the development of housing have been observed since 1930. These trends have established themselves rather firmly, and have persisted through the depression, two wars, and a severe recession. They are in the main the trend toward improved standards of building and maintenance, rehabilitation of units lacking major facilities, growing home ownership, and residential growth of metropolitan areas. It is reasonable to assume that these trends will persist through the 1960's, even if cyclical movements, technological changes, and new trends in population growth, and direction of national income should intervene.

(*a*) *Slowdown of aging.*—The large increase in new housing during the decade—especially in the second part—will slow down the process of aging of the existing housing stock and tend to reduce the proportionate share of the substandard stock.

(*b*) *Increase in home ownership.*—As table 27 suggests, the present trend of increasing home ownership will suggest better standards of maintenance for the 1960–70 housing inventory and an accentuation in the repair and rehabilitation of existing units.

(*c*) *Metropolitan growth.*—The relative growth of metropolitan areas will have a favorable effect on the reduction of substandard units both by direct rehabilitation and proportionately by raising the metropolitan share in total housing.

(*d*) *Regional trends.*—The highest rate of substandard inventory existed in the South, which held approximately 30 percent of the housing inventory, but 45 percent of the substandard housing of the Nation. The rate of new construction in the South has consistently increased. Because of the lack of adequate statistical data for the period between 1950 and 1956, we do not know whether improvements of housing standards have taken place at the same rate as in other regions or at a larger rate. Undoubtedly, major efforts during the 1960–70 period will have to be directed at the South to reduce substandard housing in this region.

TABLE 30.—*Regional share of total substandard dwellings, 1950 (1,000 units)*

Region:	*Percent of total substandard units*
Total, United States	100.0
Northeast	14.1
North Central	31.4
South	45.7
West	8.8

(*e*) *Minority housing.*—Likewise the influences of changes in the racial composition of housing occupancy are hard to predict. In 1950 a much larger rate of substandard housing existed in the nonwhite than in the white housing inventory. New construction and other net additions to the housing inventory were proportionately larger in white than in the nonwhite segment of the housing stock. We can be certain that the total changes in the substandard inventory to be expected in the decade 1960–70 will be relatively minor. Even if decided efforts are made to concentrate improvement efforts in nonwhite areas, their ratio is too small to produce significant reductions of the overall substandard housing stock.

TABLE 31.—*Occupied substandard housing by color of occupant, 1950*

[1,000 units]

	Total dwelling units	Substandard dwellings	Percent of total substandard units
Total occupied dwelling units	42,827	17,932	100.0
White	39,044	15,164	84.5
Nonwhite	3,783	2,768	15.5

2. Components of change

As in the past decades, the largest improvement in housing standards will be by repair and rehabilitation of existing units, while the dominating negative factor will be the lapse of standard units into substandard character. Again as in the past the balance between the contrasting influences should be in favor of a reduction in deficient dwellings.

TABLE 32.—*Forecast of changes in inventory of substandard dwelling units (including farm and vacant), 1961–70*

	1,000 units
Factors of increase	**3,180**
Standard units to lapse to substandard	2,120
Substandard new construction	630
Substandard units created by conversions	430
Factors of decrease	**7,770**
Substandard units rehabilitated, now standard	4,600
Demolitions	1,800
Mergers of existing units	470
Other causes (net of additions and deletions)	900
Total net decrease	**4,590**

(*a*) *Dilapidation, aging, and conversions.*—The record of the past 20 years proves that the main reason for so many units to dilapidate or to lose standard sanitary facilities is not age, but the lack of proper repair and maintenance. We are, therefore, entitled to believe that the aging of the housing stock in the next 10 years may be counterbalanced by better maintenance of existing structures and thus produce a smaller increase in substandard units through dilapidation or loss of facilities than the past decade. On the basis of the last decade's changes, we anticipate 2,120,000 units lapsing into substandard status in the decade of 1960–70; an about equal number as in the 1950–60 decade, but a smaller proportion of the total.

Conversions had a share in adding to the substandard housing inventory, but they can be expected to become fewer in the next 10 years.

(*b*) *Repair and rehabilitations.*—As the result of improved housing standards during the past two decades, the total number of units to be removed or rehabilitated is becoming smaller. Yet we may anticipate that over 4,600,000 existing at the end of 1960 will be taken out of the substandard category by 1970.

The rate of repair and rehabilitation played such an outstanding role in decreasing the substandard stock in the 1940's and 1950's that it is likely to continue in the next 10 years. Obviously, high national

incomes, ease of consumer credit, and Federal inducements in the National Housing Act, as well as enforcement of sanitary and building codes by municipalities created favorable conditions for high rates of such renewals of the old housing stock in the past two decades. On the other hand, we may hope that the rate of new construction of substandard units will decline. We have a factor here over which there exists a high degree of social control. Both national housing policies and local planning and building codes are able to exercise an influence over building standards. It can be hoped that the increasing consciousness of the community about the importance of high standards of housing will tend to reduce the percentage at which such substandard houses are still infiltrated into the housing structure. It would about equal the decrease of substandard units brought about by mergers.

(*c*) *Demolition and removals, urban renewals.*—Compared with the repair and rehabilitation, demolitions and other removals from the housing stock have been small in the past 20 years, and there may be debate and argument about the number of demolitions that will occur in the next decade. Economic changes in urban structure, migrations to the suburbs, building of superhighways inside and outside of cities, may occur at a higher rate in the next decade than in the past, yet, by themselves, they are not expected to exercise a significant influence on the rate of demolitions and removals of substandard units. Experiences of the decade behind us have shown that such programs have only resulted in relatively minor changes of the substandard housing inventory, and even a doubling of the past rate would not affect the substandard total to a substantial degree. Repairs and rehabilitations would remain paramount.

TABLE 33.—*Dwelling units removed from nonfarm housing stock by demolition or disaster losses, by decades (1,000 units)*

Period:	*Units removed*	Period—Continued	*Units removed*
1890–99	208	1930–39	397
1900–1909	297	1940–49	1,000
1910–19	414	1950–56	1,601
1920–29	580		

(*d*) *Changing standards.*—The question of to what extent urban renewal will push up the existing trend for demolitions of substandard units is largely one of national policy. The answer will largely depend on what standards of housing we want to obtain. Such standards are in constant flux.

There can be little argument about the fact that standards of housing have changed in the past 2 decades and are likely to change in the next 10 years again. The past two decades have not only lifted technical and sanitary requirements for individual dwellings, but have altered incidentals of housing, such as community facilities and neighborhood standards. We have come to look at substandard housing no longer exclusively from the point of view of the individual dwelling unit, but have accepted the idea that a well-kept house with all facilities is affected by deficient neighborhood standards and lack of community facilities. It is for these reasons that much housing that was not deficient in itself has been removed or demolished if it was located in blighted or slum areas. This movement may, and possibly should, gain strength in the 1960's. Still, we assume that the rate of demolitions will not increase by more than 50 percent over the

rate that it had in the past decade, and our forecast is based on this assumption.

Along with demolitions and removals, mergers will also decrease the deficient housing, but numbers of merged units will about equal those of added conversion units in substandard quality.

3. Net changes of substandard inventory

On the basis of the foregoing assumptions, we would have a decrease of 4,600,000 units as compared to the 1960 basis.

The decrease of substandard units will affect the 1970 substandard inventory as follows:

Total United States substandard inventory, Jan. 1, 1961	11,501,000
Net decrease, 1961–70	4,590,000
Substandard inventory, Dec. 31, 1970	6,911,000

4. Net changes in occupied nonfarm units

The expected decrease of total substandard units—roughly, by 4.6 million units—will, in part, occur in farm and nonfarm vacant units, 2 categories which have an unusually large number of substandard complements and will still have a large number of deficient units in 1960. To arrive at an estimate of the occupied nonfarm inventory, we must separate this complement. It would be desirable, of course, to remove during the next 10 years all substandard dwellings, but it might be unrealistic to accept this postulate for the farm inventory, which is still heavily beset with deficient housing.

TABLE 34.—*Total and substandard farm dwelling inventory*

[1,000 units]

	Total	Estimated substandard
1940	7,642	6,912
1950	6,358	4,974
1960	5,100	3,060
Added 1960–70	(1)	−1,530

[1] No change.

In the past substandard farm inventory has partly disappeared by abandonment or demolitions but many units have also been "statistically" lost by merging into urban areas and been counted in the nonfarm inventory. If we assume that this movement will continue in the 1960's, we may anticipate that losses will about equal the rate of the past years but in number fall back behind the past decade. It is not unreasonable to assume that 1,500,000 farm units—nearly half a million less than in the past decade will be taken out of the substandard category.

The changes in the substandard vacant inventory are difficult to assess, since vacancy rates depend on cyclical changes, features of seasonal occupancy, double households, etc. It may be assumed that with improved standards of the occupied housing inventory the vacant inventory will also have less substandard units and that as we assumed for 1960 less than 15 percent of the nonfarm substandard inventory will be vacant, a total of 700,000 units for 1970.

After deduction of vacant and farm substandard units the occupied dwelling inventory in 1970 will have 4,681,000 substandard units, considerably less than 10 percent of all nonfarm households.

TABLE 35.—*Net decrease in substandard inventory, 1960–70*

[1,000 units]

	1960	1970	Net decrease 1960–70
All United States	11,501	6,911	4,590
Farm	3,060	1,530	1,530
Vacant nonfarm	1,400	700	700
Occupied nonfarm	7,041	4,681	2,360

5. Replacement demand for nonstandard units

If we assume that for each dwelling unit demolished or otherwise removed from the housing inventory a new unit will have to be added by construction, we find that removal of substandard houses will create a total need of approximately 2,700,000 units for the decade, or 270,000 units on the average each year.

Obviously along with the substandard inventory some standard units will be removed both by voluntary demolitions and by fire, windstorm, flood, and similar involuntary losses. In the past years demolitions of standard units have been numerous, though not as large as the substandard destructions. Conceivably, as highway programs and urban renewal programs gain momentum, the ratio of standard units in demolished neighborhoods to substandard housing may increase. In the urban renewal programs of the 1950–57 period only 5 percent of removed units were standard. The ratio might increase to about 20 percent. Yet because of conversions which create additional standard dwellings, the loss of standard units by demolition, flood, etc., does not create additional net need for new housing beyond the rate of substandard replacements.

As the following table suggests, the replacement demand for the whole decade will be in the neighborhood of 2,700,000 units.

TABLE 36.—*Selected components of change for total United States housing inventory, estimated for 1960–70*

[1,000 units]

	Total	Substandard
Demolitions and net removal effect of other causes	−3,220	−2,700
Mergers	−603	−470
Conversions	993	430
Total	−2,830	−2,740

If we may expect an average yearly demand of 270,000 units (including a small number of farm units), there is no reason to assume that the number will be even year by year. It might not be unwise to direct a national effort at the removal of substandard housing in the first half of the decade, before the construction industry will be faced with the increased shelter demand springing from expected increases in household formations in the second half of the decade.

APPENDIX

I. TABLES

TABLE 37.—*United States substandard housing, dilapidated housing, and nondilapidated housing lacking sanitary facilities for 1940, 1950, 1956, and 1960*

[1,000 units]

Year	Total substandard	Dilapidated	Nondilapidated lacking facilities
1940	18,364	6,835	11,529
1950	16,944	4,483	12,461
1956	13,092	4,204	8,888
1960	11,501	3,690	7,811

Sources: See source of text table 19.

TABLE 38.—*Demolitions by age of structures, United States, 1950–56*

[1,000 units]

Year built	Total units in 1950 inventory	Units demolished 1950–56	Percentage demolished of total units in age class
Total, all ages	45,983	1,131	2.5
1940–50	9,538	184	1.9
1930–39	6,132	103	1.7
1929 and earlier	30,311	844	2.8

Source: 1956 NHI summary table 2.

TABLE 39.—*Dwelling units removed from the United States housing stock through federally sponsored urban renewal projects, total and substandard removed, 1950–57*

Year	Total units	Substandard units
Total, 1950–57	115,366	93,563
1950	53,106	42,905
1951	9,489	6,956
1952	8,993	6,965
1953	6,365	5,747
1954	6,094	4,048
1955	24,651	21,810
1956	5,869	4,559
1957	799	573

Source: Urban Renewal Project Directory, June 30, 1958, and Urban Renewal Project Characteristics of Dec. 31, 1957, Housing and Home Finance Agency, Urban Renewal Administration.

TABLE 40.—*Characteristics of the substandard dwelling units in the national housing inventory of 1956 which were vacant*

[1,000 units]

	1956 total inventory	1956 vacant inventory	Percent vacant
Total units	55,341	5,467	9.9
Nondilapidated with all facilities	42,249	2,863	6.8
Lacking facilities	8,888	1,482	16.7
Dilapidated	4,204	1,122	26.7
Total substandard	13,092	2,604	19.9

Sources: 1956 NHI summary tables 1 and 4.

TABLE 41.—*Dilapidated and nondilapidated vacant dwelling units for 1950, 1956, 1957, and 1958*

[1,000 units]

Year	Total vacant	Dilapidated vacant dwellings
1950	3,173	506
1956	4,815	609
1957	5,320	679
1958	5,728	694

Sources: 1950 U. S. Census of Housing, and selected issues of the Housing Vacancy Series of the Housing and Construction Reports, U. S. Bureau of the Census.

TABLE 42.—*Substandard housing for metropolitan areas, central cities, and outside metropolitan areas, 1956*

	Inside central cities	Inside metropolitan areas	Oustside metropolitan areas
Total dwelling units	16,287	31,614	23,727
Nondilapidated, lacking facilities	1,480	2,788	6,181
Dilapidated	784	1,335	2,912
Total substandard	2,264	4,123	9,093
Percent of total units substandard (percent)	13.9	13.0	38.3

Source: 1956 NHI tables 1 and 4.

TABLE 43.—*Quality characteristics of owner versus renter new construction, 1950–56*

[1,000 units]

	Owner-occupied	Renter-occupied
Total units constructed	7,473	2,315
Substandard	461	324
Percent substandard	6.2	13.9

Source: 1956 NHI summary table 1.

TABLE 44.—*Rehabilitation of substandard housing, 1950–56, for dilapidated units versus nondilapidated units lacking sanitary facilities*

	1950 inventory condition	Units rehabilitated to standard condition, 1950–56
Units lacking facilities	12,461	3,648
Units dilapidated	4,483	890
Total substandard	16,944	4,538

Sources: 1956 NHI summary table 4, and 1950 Census of the United States.

II. NOTES TO TEXT TABLES

General note on adjustments

Substandard inventory totals and other characteristics reported at less than 100 percent have been adjusted for nonreporting units. Units of the 1956 National Housing Inventory (NHI) summary table 4, for which 1950 data were not available, have been adjusted on the basis of 1950 census characteristics after allowance for units removed from the inventory per NHI table 2.

Table 19: Sources—1940 Census of the United States, 1950 United States Census of Housing, 1956 NHI, 1960 substandard inventory computed from text table 21.

Table 20: Source—1956 NHI summary tables 1, 2, and 4.

Table 21: Source—Computed from text, table 21. Lines 3, 5, 6, and 8 are at equivalent average annual increments computed from table 21; rehabilitated units are computed at average annual rate applied to 1956 substandard inventory of text, table 19; substandard new construction is computed from the rate of NHI summary table 1 applied to estimated new construction of 5,400,000 units; substandard removals due to mergers are computed at half of the 1950–56 average annual increments.

Table 22: Source—1940 Census of the United States, 1950 United States Census of Housing, 1960 total farm units projected from 1950 census figures on basis of number of farms, 1954–56, 1957 Statistical Abstract of the United States, table 780.

Table 23: Sources—Text tables 19 and 27.

Table 24: Source—NHI summary table 4.

Table 25: Source—1950 United States Census of Housing.

Table 26: Source—1950 United States Census of Housing.

Table 27: Source—1940 Census of the United States, 1950 United States Census of Housing, NHI summary tables 1 and 4.

Table 28: Source—NHI summary tables 1 and 4.

Table 29: Source—Computed from NHI summary table 4. (NOTE.—Percentages computed for comparison purposes only; applicable to basic 1950 inventories, as 1950 versus 1956 cross tabulation excludes approximately 10 million 1950 units which were not reporting in 1950, for which 1950 data were unidentified, or which were removed in other components of change.)

Table 30: Source—Computed from text table 32.

Table 31: Source—1950 United States Census of Housing.

Table 33: Sources—Leo Grebler, D. M. Blank, L. Winnick, Capital Formation in Residential Real Estate, National Bureau of Economic Research, 1956, page 329; 1950–56 from NHI summary tables 1 and 2. This figure includes farm housing and is the sum of demolitions and the net of removals for "other causes" and additions from "other sources."

Table 34: Sources—See note to table 27.

Table 35: Sources—See note to table 28.

Table 36: Sources—See note to table 28.

C. Relationships Between Family Income and Housing Expense

RELATIONSHIPS BETWEEN FAMILY INCOME AND HOUSING EXPENSE

JAMES MORGAN, Survey Research Center, University of Michigan, Ann Arbor, Mich.

This statement was prepared in response to the following question:

> What is a proper relationship between family income and housing expense from the standpoints of purchase price and annual income as well as monthly housing expense and monthly income?

The policies of mortgage lenders, and of Government mortgage insurers are based on certain assumptions about the amount that individuals in various situations can afford to spend on housing. By setting maximum allowable mortgage loans and repayment periods and minimum downpayments, it is hoped to keep people from excessively burdensome housing costs, and to reduce the chances of defaults and foreclosures.

The FHA Underwriting Manual recognizes that no simple rules are sensible in this matter:

> One of the principal problems in mortgage credit analysis is to determine whether a mortgage obligation will be within the mortgagor's financial ability to pay. The rules of thumb, "monthly mortgage payment should not exceed 25 percent of a mortgagor's income," and "value of the property should not exceed 2½ times the mortgagor's annual income," have been demonstrated to be unreliable as criteria, and, in fact, unsound in principle. Specific maximum ratios for all mortgagors are not practicable because of variations in local conditions, living standards, different family housing needs, and other conditions affecting ability to pay (p. 1654).

What this statement does not mention, however, may be the most important aspect, i. e., desire for a home and willingness to sacrifice to get one. These may well be more important than anything else, once one gets above the very low income levels. The chart given on page 1655 of the manual as a sort of standard range of permissible prospective monthly housing expense, and the charts prepared for each insuring office jurisdiction, are apparently based at least in part on the actual loans extended. They thus represent practice, rather than a new independent estimate of what might be possible. Indeed, the proportions of income seen as allowable for housing drop as one goes up the income scale, when obviously the potential funds available for housing are increasing.

It is also difficult to compare the FHA figures with others, since both "net effective monthly income" and "prospective monthly housing

expense" are the result of complex definitions and estimates. The most interesting aspect of the chart in the manual, however, is the wide range exhibited in the actual experience.

VARIABILITY IN CONSUMER BEHAVIOR

Tables 45, 46, and 47 presented here are based on the nonfarm part of the national samples used in the surveys of consumer finances, which are conducted cooperatively by the Federal Reserve Board and the Survey Research Center of the University of Michigan. These tables also show a wide spread of actual housing cost even within family income groups. It must be remembered, however, that they too show only actual experience, and do not tell us how much people could safely put into housing if they were allowed to, nor how long the repayment period could be (allowing more house even with the same current outlay).

Even taking into account the fact that the lowest income group among homeowners includes many retired people with their homes paid for (and the free housing not included in their income), table 45 shows a wide variety of mortgage payments within each income level. Since a significant and varying part of monthly mortgage payments represents amortization of principal, and since they include in varying degrees other costs such as insurance and taxes, they are not a good measure of the real economic cost of housing to the consumer. Even if mortgage payments include insurance and property taxes, they do not include other costs of housing such as utilities, maintenance, depreciation, foregone interest on the owner's equity invested in the house. On the other hand they include amortization of the principal of the mortgage which is not a cost to the consumer but represents saving invested in the house.

TABLE 45.—*Monthly mortgage payments by family income groups, 1957 and 1958 surveys*[1] *(nonfarm homeowners with mortgages only)*

[Percent of families]

Monthly mortgage payment	All incomes	Less than $2,000	Total family income			$5,000–$5,999	$6,000–$7,499	$7,500–$9,999	$10,000 and over
			$2,000–$2,999	$3,000–$3,999	$4,000–$4,999				
Less than $30	9	31	35	19	12	7	4	3	5
$30 to $39	8	13	8	16	13	10	6	6	3
$40 to $49	11	10	5	21	14	12	12	8	8
$50 to $59	17	14	16	13	22	22	18	16	7
$60 to $74	20	14	17	19	18	23	23	20	18
$75 to $99	22	8	15	7	17	21	27	28	26
$100 to $149	10	6	4	2	2	5	10	16	20
$150 and over	3	4	(2)	3	2	(2)	(2)	3	13
Total	100	100	100	100	100	100	100	100	100
Estimated number of cases	600	76	65	120	190	250	375	375	375
Percent of owners who have a mortgage		17	32	48	57	65	76	71	60
Interpolated median payment	$64	$48	$51	$47	$55	$60	$67	$72	$84

[1] Includes taxes and insurance, even utilities in some cases, not in others. These items are, however, only a small part of total mortgage payments.
[2] Less than 0.5 percent.

Source: 1957 and 1958 surveys of consumer finances.

On the other hand, the value of a house is a rather good measure of its economic cost to the user. Taxes, interest on the investment, utilities, insurance, maintenance, depreciation, are all proportional to the market value of the house. Hence, the differences in house values given in table 46 represent similar differences in the cost of housing to families.[1] Here again the wide diversity of consumer behavior patterns is evident. There are a few people during these years with temporarily low incomes, but not a very large number. There are others where income has changed since the house was purchased, but since many people purchase homes in the middle of their earning span or earlier, their incomes are as likely to rise as fall.

TABLE 46.—*Value of owner-occupied nonfarm homes, by family income groups (1956–58 combined)*[1]

[Percent of families]

Value of home	All incomes	Family income						
		Under $1,000 [2]	$1,000–$1,999 [2]	$2,000–$2,999	$3,000–$3,999	$4,000–$4,999	$5,000–$7,499	$7,500 and over
Under $2,500	4	16	11	8	5	4	1	(3)
$2,500 to $4,999	8	19	14	17	15	12	4	2
$5,000 to $7,499	14	30	24	25	21	16	12	4
$7,500 to $9,999	15	11	15	16	20	21	19	9
$10,000 to $12,499	19	15	17	17	18	22	25	16
$12,500 to $19,999	26	6	14	13	16	19	32	36
$20,000 or over	14	3	5	4	5	6	7	33
Total	100	100	100	100	100	100	100	100
Interpolated median	$11,185	$6,250	$7,666	$7,500	$8,625	$9,650	$11,400	$16,475
Number of cases	4,790	224	307	335	368	525	1,383	1,446
Mean (1958 only)	$12,580	$6,700	$9,250	$8,520	$8,550	$10,200	$12,250	$17,830

[1] From the 1956, 1957, and 1958 surveys of consumer finances.
[2] Most of the people in these income groups are old, retired people.
[3] Less than 0.5 percent.

Table 47 shows the rents paid by renters, combining survey data for 6 years to provide stability, since rents did not change much during this period. Here there is somewhat less diversity in amounts paid within an income group, but still a great deal. Renters are presumably freer to move than homeowners. The owners can have substantial changes in income, particularly spending unit or family income, during the period when they are paying for a house, and even more during the longer period in which they own the house.

This last point deserves some emphasis. For most families, the peak need for housing space occurs before the peak earning rates of the family head are reached.[2] It also occurs while the wife is out of the labor force, often temporarily. While the FHA Underwriting

[1] An independent check by appraisers indicated that respondents' estimates of market values of their homes were reasonably accurate and not systematically biased, see: J. Lansing and L. Kish, Response Error in Estimating the Value of Homes, Journal of the American Statistical Association, 49 (September 1954), 520–538.
Survey data on property taxes indicate that while there are some regional differences, in general they are proportionate to the market values of houses, see: E. S. Maynes and J. N. Morgan, The Effective Rate of Real Estate Taxation: An Empirical Investigation, Review of Economics and Statistics, XXXIX (February 1957), 14–22.

[2] See John Lansing and James Morgan, Consumer Finances Over the Family Life Cycle, in Consumer Behavior II, Lincoln Clark, edition, New York, N. Y., U. of M. Press, 1955.

Manual allows the income of "secondary mortgagors" to be included in "effective income" under certain conditions, it states explicitly:

> In many cases the secondary mortgagor is the wife of the principal mortgagor and her income may not continue through the early period of mortgage risk. A proper conclusion on this point will require a determination as to whether the wife's employment is a definite characteristic of the family life, i. e., a condition which may normally be expected to prevail. This analysis of the wife's employment will take into consideration such factors as her age, size of family, length of time married, length of time employed, length of time employed since marriage, nature of the employment, training for the work, and whether her employment is definitely needed or required to meet the minimum living necessities of the family. The wife's employment may be a definite characteristic of families in the lower income groups in some localities * * * When a favorable conclusion cannot be reached with respect to the permanency of the wife's employment, no part of her income can be considered as effective. If it cannot be concluded that a wife's employment will continue during the early period of mortgage risk, there is no justification for including an arbitrary percentage of her present employment income as effective income (p. 1616).

TABLE 47.—*Monthly rent paid by family income groups, 1953–58 combined* [1]

[Percent of families]

Monthly rent	Less than $1,000	$1,000 to $1,999	$2,000 to $2,999	$3,000 to $3,999	$4,000 to $4,999	$5,000 to $7,499	$7,500 or over
Less than $20	34	22	11	6	4	2	
$20 to $29	33	24	19	14	10	5	3
$30 to $39	15	23	20	17	13	12	7
$40 to $49	7	13	19	20	18	15	7
$50 to $74	8	15	25	34	39	41	27
$75 to $99	2	2	5	7	12	18	30
$100 to $149	1	1	1	2	3	6	16
$150 to $199							6
$200 or over					1	1	4
Total	100	100	100	100	100	100	100
Interpolated median	$25	$32	$40	$47	$53	$60	$79
Number of cases (approximately)	355	590	650	920	900	1,260	750
Mean rent (1958 survey only)	$28	$35	$42	$48	$51	$61	$100

[1] Includes utilities in some cases, not in others, depending on what is included in the contract rent.

Source: 1953–58 Surveys of Consumer Finances.

In practice this is apparently often interpreted to prospective applicants in a simpler form: "You can't count your wife's income unless she is over 40." This rule would make it impossible to make any allowance for situations where the wife plans to work between the periods when she is having babies. Particularly among families of minority races, where inlaws are more frequently available in the home or nearby to take care of the children, and where the wife works at jobs where it is easy to set her own schedules, e. g., housework, such a procrustean policy would be likely to work a real hardship. It is entirely possible to think of situations where there are several children, a grandparent, and a wife all working, but where

none of their incomes could be counted as part of "effective income" under FHA rules. Some consideration might be given to this situation. Certainly it means a reduction of the risk that the family income will be cut so low as to make the family unable to meet the mortgage payments.

In a similar manner, people whose incomes are almost certain to rise within the mortgage period, and rise substantially, may be forced to settle for a house that is too small for their needs, and must then either face the inconvenience and cost (including brokers' fees) of moving, or live in quarters that are too small. Table 48 shows that there are systematic patterns of spending unit income over the lifetime of the head of the unit. The level and shape of these patterns depend on the education level of the head. Particularly for highly educated people, however, there can be predicted substantial increases in income during the period of mortgage payments. For them, restricting mortgage loans to amounts which seem reasonable in relation to current income would appear unnecessarily cautious and restrictive.

TABLE 48.—*Average disposable income by age and education, 1956 and 1957 incomes, for white nonfarm spending units only* [1]

Age	Number of years of formal education				
	1 to 8	9 to 11	12 (high school grade)	13 to 15 (some college)	16+ (college grade)
18 to 24	$1,880	$2,730	$2,950	$2,700	$4,480
25 to 34	3,610	4,870	4,980	5,440	6,500
35 to 44	4,420	5,040	5,490	7,530	8,240
45 to 54	4,510	4,670	6,230	7,460	9,710
55 to 64	3,610	4,750	6,240	5,790	7,670
65 and over	2,110	2,493	3,560	3,380	8,950

[1] Data combined from the 1957 and 1958 Surveys of Consumer Finances. Numbers are rounded to the nearest $10.

LACK OF ADJUSTMENT OF HOUSING SPACE TO FAMILY SIZE

In this regard, it is of some importance to note that more complex analysis we have made from the 1955 Survey of Consumer Finances on number of rooms, rent or house value, indicate that two factors—whether people own or rent, and their income level—have more effect on housing consumption than does the number of people in the family. Excluding single-person families and those where the head is over 65 and those with family income less than $2,000, we find that the average effect over 6 income groups and 3 family sizes, of moving from renting to owning, is to increase the number of rooms by 18 percent or eight-tenths of a room. The average effect over 6 income groups and 2 homeownership categories of going from 2 people to 5 or more is to increase the number of rooms by about 13 percent or six-tenths of a room. And the average effect over 2 homeownership groups and 3 family-size groups of moving from an income in the $2,000 to $3,999 range to 1 in the range $10,000 and over is to increase the number of rooms by nearly one-quarter or by 1.1 rooms. Even in the upper-income groups where one would expect less economic constraint, the number of rooms does not seem to increase as one would expect with the number of people in the family. The basic data be-

hind these analyses are shown in table 49. The table must be used with caution owing to the small numbers of cases on which some of the averages are based. The persistent pattern over the whole table is persuasive, however. Table 50 shows a similar lack of adjustment of housing to numbers of people in the family using value of house as a rough measure of the amount of housing, rather than number of rooms. Housing space is clearly not adjusted to the size of families. Homeowners consume more housing than renters, and people with higher incomes consume more housing than those with lower incomes; but people with larger families put little if any more money into housing, and secure a little more space but not much more.

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TABLE 49.—*Average number of rooms per family by age, family income, and number of people in family, 1955*

[Single spending unit nonfarm families with head married and 2 or more adults]

Family income	Owners									Renters								
	Age of family head																	
	25 to 34 years			35 to 44 years			45 to 64 years			25 to 34 years			35 to 44 years			45 to 64 years		
	Number of people			Number of people			Number of people			Number of people			Number of people			Number of people		
	2	3 to 4	5 and over	2	3 to 4	5 and over	2	3 to 4	5 and over	2	3 to 4	5 and over	2	3 to 4	5 and over	2	3 to 4	5 and over
Less than $1,000	-----	-----	3.0	8.0	4.0	6.0	5.3	5.0	4.0	5.0	-----	3.0	-----	-----	3.0	-----	-----	-----
$1,000 to $1,999	-----	3.7	4.0	-----	4.7	4.7	4.6	3.9	4.0	-----	2.8	3.6	3.0	2.4	4.5	3.8	4.0	4.0
$2,000 to $2,999	3.0	5.7	4.5	6.0	4.3	5.8	5.2	5.0	-----	5.5	3.3	4.6	3.0	4.2	4.0	4.0	3.0	5.3
$3,000 to $3,999	3.3	4.2	5.1	4.2	4.7	5.4	5.1	4.7	6.0	3.0	4.0	4.1	4.5	4.6	4.0	4.4	4.0	4.5
$4,000 to $4,999	5.7	4.9	5.6	4.9	4.6	5.0	5.1	5.6	5.8	4.1	4.5	5.2	3.6	4.5	5.0	4.4	4.4	4.7
$5,000 to $7,499	5.4	5.2	4.6	4.9	5.3	5.9	5.2	5.1	6.1	3.5	4.4	5.4	3.7	4.5	4.7	4.1	5.4	6.0
$7,500 to $9,999	6.0	5.2	5.6	4.9	5.4	6.4	5.4	5.8	4.7	4.7	4.5	4.0	4.8	4.6	4.3	4.9	4.5	4.5
$10,000 and over	6.3	5.2	6.6	7.5	6.1	5.3	5.5	6.0	6.8	3.6	4.5	5.0	4.3	4.7	5.5	4.9	5.5	6.6

NB: These averages, particularly for young or low-income owners and high-income renters, are based on very few cases. Therefore, only the pattern has meaning.

TABLE 50.—*Average house value per family, by age, family income, and number of people in family, 1955*

[Single spending unit nonfarm homeowning families with head married and 2 or more adults]

Family income	Age of family head								
	25 to 34 years			35 to 44 years			45 to 64 years		
	Number of people			Number of people			Number of people		
	2	3–4	5 and over	2	3–4	5 and over	2	3–4	5 and over
Under $1,000	-------	-------	$600	$6,000	$1,500	$3,000	$8,940	$5,500	$1,000
$1,000 to $1,999	-------	$2,320	2,820	-------	6,500	10,751	6,305	3,000	1,500
$2,000 to $2,999	$4,000	6,320	2,333	9,400	3,350	4,230	8,044	7,713	-------
$3,000 to $3,999	7,030	5,425	6,445	11,800	6,580	6,501	9,855	8,463	7,017
$4,000 to $4,999	9,620	11,760	8,382	6,889	8,007	8,663	10,350	8,435	9,442
$5,000 to $7,499	9,360	10,990	9,162	10,100	11,650	11,980	11,980	10,700	10,390
$7,500 to $9,999	11,900	15,700	11,800	13,350	14,530	14,420	15,520	14,670	14,860
$10,000 and over	14,500	17,290	23,400	23,410	22,460	21,760	22,540	24,310	20,890

NOTE.—These averages, particularly for young and low-income owners, are based on very few cases and only the pattern has meaning.

Some of this apparent lack of adjustment of housing space to physical needs may be the result of inertia, some to the fact that with larger families the same dollar income may not easily allow more housing expenditure since there are also more demands for food, clothing, and so forth. But it is also possible that some of this lack of adjustment results from the policies of the mortgage lenders themselves, in setting maximum mortgages and mortgage payments which depend on income, and which, if anything, are more restrictive for larger families in the same income group.

UNFULFILLED DESIRE FOR HOUSING

How do we know that these differences do not represent simply differences in tastes and preferences? Is there evidence of unsatisfied demand for better housing?

In early 1958, more than one-fourth of the homeowners and nearly half of the renters had plans to buy a home sometime in the future (table 51). Among the only other important group, the related secondary units living with relatives (see footnote to table 51), nearly half had plans to buy. A substantial number of owners, in addition, had plans to make additions to their homes. The frequency of these plans, and of hopes expressed in other surveys, combined with the lack of current adjustment of house size to number of people, betokens a substantial unmet demand for housing, for which financing terms may well prove a determining factor.

We are dealing here not with hard economic facts, but with people's attitudes, preferences, willingness to give up one economic good for another. They have proven themselves willing to part with substantial sums of money, and to contract for substantial monthly payments, for the purchase of rapidly depreciating cars and appliances. If they really want better homes, they will pay for them, too.

TABLE 51.—*5-year house-purchase plans within present housing status, 1958*

[Nonfarm spending units only]

Plans to buy	Percent of spending units					
	Primary owner	Primary renter	Primary other	Unrelated renter	Unrelated other	Related secondary
Plans to buy in 1958 [1]	6.8	10.0	2.0	----	8.8	6.6
Plans to buy after 1958	20.5	35.5	16.6	29.5	27.7	34.6
Yes; definitely	9.9	17.5	6.1	20.7	7.6	12.8
Probably	2.4	3.5	5.2	2.8	7.6	4.2
Undecided	8.2	14.5	5.3	6.0	12.5	17.6
No plans to buy	70.4	50.5	78.5	66.6	59.1	48.7
N. A./D. K. plans to buy	2.3	3.9	3.0	3.8	4.4	10.0
Total	100.0	99.9	100.1	99.9	100.0	99.9
Percent of sample	48.9	31.6	3.4	2.3	.7	8.2

[1] Includes those who have already bought in 1958, or who are building.

NOTE.—Tables 51-53 are on a spending unit, not family basis: that is, related secondary units (living with relatives but with separate finances) are counted as separate units.

In early 1955, some 44 percent of nonfarm families had less than 1½ rooms per person, and most of those with larger ratios were older people whose children had left home. Even counting children under 18 as half, there were 30 percent with less than 1½ rooms per "equivalent adult."

When renters were asked in 1955 about felt needs for changes in housing, many mentioned need for space or better neighborhood, but the predominant reply given by two-thirds of them was that they simply wanted to own their own home. At that time, a third of them had specific plans, another third of the renters reported that they were not likely to stay in their present residence or felt that it was unsatisfactory.

Among the smaller group of spending units living with relatives, few report any plans to buy a house soon or to move or any dissatisfaction with their housing. However, more than a third of them have longer range plans to buy a home.

We conclude that there are many unfulfilled desires to own a home and to have more housing. Are these desires unmet because people also have other desires they are more willing to pay for, or because better housing or financing for it is not available?

CAPACITY TO PAY FOR HOUSING

This brings us back to the question whether the traditional rules as to what people can safely pay for housing are not too conservative. If one did not know how much people make in car payments, what would be considered safe? The two attached tables (tables 52 and 53) showing installment-debt payments and total fixed payments by spending unit income groups indicate that people are often paying as much on rapidly depreciating items as others pay on homes, yet the repossession rates, even during the past year, have been remarkably low.[3]

[3] It should be noted that tables 52 and 53 probably understate the amounts people are paying on installment-debt payments. Aggregate checks on survey data tend to indicate that people do not report all their debt payments. This merely strengthens the point that people can afford substantial contractual payments, if they want to.

We suggest that this evidence indicates the possibility that many individuals would be willing to pay more on homes than present arrangements allow, and without substantial frequency of defaults. When we consider the present status of income-maintenance programs, Federal and State, and the avowed responsibility of the Federal Government to prevent any substantial unemployment in the economy, it appears likely that we could safely allow people to buy more housing, and that, if allowed, they would demand more.

Finally, expansion in housing means expansion in many allied fields, since owners continue to spend more, at every income level, on household furnishings and appliances.

While the present techniques for tailoring mortgages to the situation of the family and the area are useful and will presumably continue, we suggest (*a*) that more allowance be made for even part-time wife's earnings and for the reasonably expected increases in income of the head, and (*b*) that experiments be made with substantial loosening of income and similar requirements.

TABLE 52.—*Annual rate of instalment debt payment as percent of disposable income within spending unit income groups*

[1957 income, early 1958 payment rate]

Annual rate of instalment debt payment as percent of disposable income	All incomes	Under $1,000	$1,000 to $1,999	$2,000 to $2,999	$3,000 to $3,999	$4,000 to $4,999	$5,000 to $5,999	$6,000 to $7,499	$7,500 to $9,999	$10,000 or more
No payments	52	73	67	60	52	40	43	35	43	58
Under 5 percent	6	(1)	1	3	6	7	7	12	14	8
5 to 9 percent	11	1	2	9	12	15	13	14	13	16
10 to 19 percent	17	7	10	12	14	19	20	28	23	12
20 to 39 percent	11	9	11	12	12	16	16	10	6	4
40 to 59 percent	2	1	6	2	3	1	(1)	(1)	(1)	(1)
60 to 79 percent	(1)	3	1	1	(1)	(1)	(1)	(1)	(1)	(1)
80 to 99 percent	(1)	3	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)
100 percent and over, zero or negative income	(1)	3	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Not ascertained	1	(1)	1	1	1	2	1	1	1	2
Total	100	100	100	100	100	100	100	100	100	100
Number of cases	3,117	209	358	307	358	374	371	432	368	340
Weighted percent of sample	100.0	8.3	13.2	10.9	12.6	12.3	11.7	12.7	10.4	7.8

[1] No cases or less than 0.5 percent.

NOTE.—Tables 52 and 53 are of spending units, include related secondary units.

TABLE 53.—*Ratio of regular payments[1] to disposable income by income, 1957 (percentage distribution of spending units)*

[1958 income, early 1957 payment rate]

Ratio of regular payments (annual rate) to disposable income	All incomes	Under $1,000	$1,000 to $1,999	$2,000 to $2,999	$3,000 to $3,999	$4,000 to $4,999	$5,000 to $5,999	$6,000 to $7,499	$7,500 to $9,999	$10,000 and over
Makes no such payments	6	28	14	7	4	3	2	1	[2]	2
Under 9 percent	20	19	26	28	21	17	13	13	15	31
10 to 19 percent	15	7	7	15	12	12	17	18	26	28
20 to 39 percent	33	10	24	24	32	39	43	45	44	28
40 to 59 percent	11	10	16	10	17	13	13	9	3	2
60 or more [3]	4	17	8	2	3	2	1	1	1	0
Ratio not ascertained	11	9	5	14	11	14	11	13	11	9
Total	100	100	100	100	100	100	100	100	100	100
Number of cases	3,041	224	310	325	352	395	369	392	327	347
Weighted percent of sample	100.0	8.7	12.1	11.9	12.5	13.9	12.1	11.7	9.0	8.1

[1] Includes mortgage or rent payments, installment debt payments, social security payments, payments into retirement funds, and insurance premiums.
[2] No cases or less than 0.5 percent.
[3] Includes cases where income was zero or negative.

How could one establish standards for mortgage credit which would be realistic and would keep defaults to a reasonably low figure, but favorable enough to facilitate the better housing which many Americans clearly want? It is instructive to note that the FHA's entrance into the mortgage field in the 1930's altered long-standing traditions and customs, and with very favorable experience. Since that time levels of real income have climbed so substantially that it is quite possible that the proportions of income which people in the third, fourth, and fifth deciles of income could safely put into housing are higher than they were in the thirties. Perhaps the only way to tell would be to experiment.

HOUSING COSTS AND FAMILY INCOME

H. E. RILEY, Chief, Division of Prices and Cost of Living, Bureau of Labor Statistics, Department of Labor

The question discussed in this paper:

> What is the proper relationship between family income and housing expense?

has been the subject of studies by economists and statisticians for many years. Intensive studies of family expenditures, including analyses of outlays for housing, were made as early as the 1830's in France and Germany by Frederic Le Play and in Belgium by E. Ducpetiaux. In 1875, Ernst Engel, head of the Royal Prussian Bureau of Statistics originated his "economic law," which, as translated by Carroll D. Wright, included the proposition that the percentage of income spent for lodging or rent and for fuel and lighting is invariably the same whatever the income.[1] This idea has persisted to the present time, despite its proven inaccuracy, in the form of various "rule of thumb" guides used in judging credit risks. Expenditure studies from the middle 1880's on have shown that rule to be incorrect. Instead, it has been demonstrated that the portion of income spent for housing tends to decrease as income rises. As total family expenditures rise, the amount allocated to housing increases but at a slower rate.

The first survey of expenditures by American families was made in 1874. That study, and others made during the 19th century, was concerned with workers' families, or other groups with relatively low incomes. As the proportion of homeowners among these families was generally found to be quite low, the measure of expenditures for housing usually related to rent, light and fuel. Consequently, there is very little historical data on the cost of home purchase in relation to family income.

The studies in this area made during the past 85 years have been of two general types: (1) income and expenditures studies, analyzing, among other things, housing expenditures in relation to income, and the characteristics of the dwellings; and (2) standard budget studies, calculating the cost of maintaining a family of a given size at a defined level of living and at a specified time and place.

The first major family expenditures survey in this country related to the cost of living of workingmen's families in Massachusetts and was reported by the Massachusetts Bureau of Statistics of Labor in 1875. One of the findings in that investigation was that only one percent of the families studied were homeowners, a fact which was considered "most suggestive and important" as indicative of the condition of workingmen. The report continues, "How can we even imagine many of

[1] Sixth Annual Report of the Massachusetts Bureau of Statistics of Labor, March 1875, pt. IV, p. 438.

them with a competence when so few have been able to take the first step toward independence."

Some information on homeowner costs has been obtained in most of the expenditure surveys made since 1900, but usually the incidence of homeownership among wage earners and clerical workers was too low to permit detailed analysis of the subject. Thus, the report on a study by the United States Bureau of Labor in 1901 limits the major part of the information on housing costs to the expenditures of 11,156 "normal families" which were "families which had a husband and wife; not more than 5 children, no one of whom was over 14 years of age; no dependent, boarder, lodger, or servant; occupied a rented house, and had expenditures for fuel, lighting, food, clothing, and sundries." [2]

The 1901 survey revealed considerable variation in the proportion of family expenditures devoted to rent, fuel and light. These shelter costs ranged from 25 percent of total expenditures for families with annual income of less than $600 to 21 percent for families in the $1,100 to $1,200 bracket. Family size was also a significant factor: families with no children allocated 26 percent of their expenditures to rent, fuel and light, whereas for families with 5 children these costs represented 22 percent of the total.

Later surveys provide more detail showing the inverse relationship between income and proportionate housing costs. Thus, the 1918 investigation of living costs, conducted by the Bureau of Labor Statistics, revealed the following pattern: [3]

TABLE 54.—*Percent of total family expenditure for rent, fuel, and light by income class, 1918*

Income class	Percentage of total expenditures spent for rent, fuel, and light
Under $900	21.3
$900 to $1,199	19.9
$1,200 to $1,499	19.4
$1,500 to $1,799	18.7
$1,800 to $2,099	18.2
$2,100 to $2,499	16.6
$2,500 and over	14.7

The first large-scale investigations providing detailed information on differences in housing costs of renters and owners were the nation-wide survey of money disbursements of wage earners and clerical workers, conducted by the Bureau of Labor Statistics in 1934–36, and the 1935–36 study of consumer purchases carried out by the Bureau of Home Economics of the Department of Agriculture and the Bureau of Labor Statistics as a Work Projects Administration project.

The latter survey is particularly useful in that it provides data for all urban families, except those on relief and those with annual incomes

[2] U. S. Department of Commerce and Labor, 18th Annual Report of the Commissioner of Labor, Cost of Living and Retail Prices of Food.
[3] U. S. Department of Labor, Bureau of Labor Statistics, Bulletin No. 357, Cost of Living in the United States.

over $10,000. The report yields the following figures on the relationship of homeownership to income.[4]

TABLE 55.—*Home ownership and ratio of housing expenditure of owning to renting families by income class, 1935–36*

Income level	Proportion of single tenure families		Ratio of total housing expenditure of owning to renting families
	Owning throughout year	Renting throughout year	
Under $500	20.9	79.1	129.0
$500 to $750	21.4	78.6	124.8
$750 to $1,000	21.3	78.7	121.9
$1,000 to $1,250	27.5	72.5	125.3
$1,250 to $1,500	31.0	69.0	115.5
$1,500 to $1,750	33.5	66.5	111.7
$1,750 to $2,000	36.9	63.1	113.1
$2,000 to $2,500	43.7	56.3	105.7
$2,500 to $3,000	50.5	49.5	102.6
$3,000 to $4,000	54.0	46.0	103.4
$4,000 to $5,000	59.3	40.7	103.5
$5,000 to $10,000	63.8	36.2	95.7

The table shows the progressive increase in homeownership with increases in income. The data on ratio of expenditures are also of interest in that they suggest that the relative burden of homeownership is higher for low-income families and decreases as incomes rise. Among all income classes except those over $5,000, however, owners housing expenditures exceeded those of renters.

Another aspect of housing costs which is pertinent to the current inquiry is the trend in the burden of family shelter costs during depression periods. Housing costs, and particularly the costs to homeowners, tend to be relatively inflexible. The owner cannot reduce his housing costs appreciably or in gradual steps if his income declines. He has an equity in a specific property and has made commitments, as a rule, to pay off a debt on that property. In periods of business recession his equity may be wiped out if he is forced to dispose of the home in a poor market. For this reason, homeowners tend to make great sacrifices in other necessities in order to protect their properties.

Renters' expenditures for shelter are also relatively inflexible, although to a lesser degree than homeowner costs. The financial survey of urban housing[5] conducted in 1933, revealed that the ratio of contract rent to income in 52 cities was 24.2 percent. By 1946, according to a Census survey, the median monthly rent paid by primary families and individuals in urban areas was 11.8 percent of their median income. While the bases of comparison between the two periods are not exact, the great shift in rental costs relative to income is very evident. One of the important reasons for this trend is the "stickiness" of rents. The rent index of the Bureau of Labor Statistics averaged 83.6, on a 1947–49 base, in 1933, and had risen to 91.4 in 1946, a gain of about

[4] Family expenditures in the United States, Statistical Tables and Appendixes, National Resources Committee, 1941. Table 182, p. 62. Total housing expenditure for owning families includes (1) money expense for interest on mortgage, refinancing charges, taxes, special assessments, repairs, replacements, and insurance, plus (2) net imputed rental value of the home, i. e., gross rental value minus money expense. Does not include expense for fuel, light, and refrigeration.

[5] U. S. Department of Commerce, Bureau of Foreign and Domestic Commerce, Financial Survey of Urban Housing, David L. Wickens (Washington, 1937).

9 percent. In the same period, family incomes increased about 126 percent.

The desirability of homeownership for the low-income wage earner is a much-debated subject. As noted above, the 1935 survey of family expenditures indicated that homeownership was generally more costly than rental. The definition of housing expense included, in addition to the current money expense, the net imputed rental value. This may have exceeded the average downpayments and payments on principal used in later analyses. It has been argued that the typical wage earner is better off as a renter because he is in better position to change locations in the event of unemployment or the development of better job opportunities elsewhere. Housing is only one of several factors, however, which tend to restrict the mobility of labor. Reemployment rights related to job seniority, unemployment benefits, community social and religious ties, and job holding by more than one member of the family, all tend to hold the family in the community.

On the other hand, it is generally conceded that homeowners acquire benefits that are not usually available to renters—more space, better adapted to their family's needs, more community participation, and a greater sense of security. That these benefits are recognized by the average family is indicated by the increasing proportion of homeowners among the population. Moreover, there is some statistical evidence that the cost of homeownership under some market conditions does not exceed the cost of renting equivalent quarters.[6] The desire for homeownership has, of course, been easier to satisfy in recent years because of the easier, long-term financing available.

Although most of the family expenditure or "cost of living" surveys have included descriptive data on the condition of the housing, they have not provided specific answers to questions regarding the adequacy of the housing for the family's needs and its cost in relation to the family's ability to pay for it. To answer these questions, various authorities have developed standard budgets, specifying the amounts and kinds of goods and services required to maintain a family at some defined level of comfort, health, and efficiency.

One of the early and widely known studies of this type was undertaken in 1907 by R. C. Chapin. He calculated the cost of maintaining "a normal standard" for a workingman's family of 4, 5, or 6 persons in New York City. He concluded that "an income under $800 is not enough to permit the maintenance of a normal standard." This was based on his study of the deficiencies in the living conditions of families having annual incomes of $600 to $700, which, he found, had "scarcely more than 3 rooms for 5 persons. Three-fifths of the families have less than 4 rooms, and more than 1½ persons to a room." On the other hand, the $900 income families were found to have "shelter enough to meet the most urgent demands of decency. Sixty-eight percent of the 900 families have 4 rooms or more."

Since the turn of the century numerous budget estimates have been made by local welfare agencies, arbitration commissions, research organizations, and governmental agencies. Typically, the budgets related to the needs of a five-person family and were designed to provide for housing which would assure a minimum standard of health

[6] See Monthly Cost of Owning and Renting New Housing, 1949–50 (Monthly Labor Review, August and September 1954, pp. 851–858 and 977–982, respectively).

and comfort. Efforts to define housing standards in more precise terms were made by the Bureau of Labor Statistics in its Budget for a Government Employee's Family of Five in Washington, D. C., developed in 1919, and the 1920 Minimum Quantity Budget Necessary To Maintain a Worker's Family of Five in Health and Decency. These budgets specified that the housing must comply with housing laws, local building codes and ordinances, and must provide adequate light, ventilation, sanitary facilities, etc.

The latest and most detailed standard budget estimates by the Bureau of Labor Statistics were made in 1947, in response to a directive from the Committee on Appropriations of the House of Representatives "to find out what it costs a worker's family to live in the large cities of the United States." That budget, usually referred to as the City Worker's Family Budget,[7] defined what was considered to be "a modest but adequate standard of living" for a 4-person family consisting of an employed father, a housewife not gainfully employed, and 2 children under 15. The housing standard provided in the budget called for a rented house or apartment, containing five rooms, including a kitchen, and a bathroom. In formulating the further specifications for heat, light, facilities, and equipment, the Bureau followed, insofar as practicable, the basic principles of healthful housing prescribed by the American Public Health Association. The annual cost of the budget in each of 34 large cities was estimated on the basis of prices, including rents, prevailing at that time. The budget was again priced in October 1951, but has not been estimated since that time because the standards and many of the commodities included are no longer representative of family spending habits.

The following table presents the 1951 budget totals, the housing cost segment, including rent, heat, and utilities, and the ratio of housing cost to the total budget for each of the 34 cities.

TABLE 56.—*Estimated annual cost of city worker's family budget, October 1951*

City	Total budget	Housing	Housing as percent of total budget	City	Total budget	Housing	Housing as percent of total budget
Atlanta	$4,315	$934	21.6	Milwaukee	$4,387	$964	22.0
Baltimore	4,217	875	20.7	Minneapolis	4,161	797	19.2
Birmingham	4,252	805	18.9	Mobile	3,969	611	15.4
Boston	4,217	801	19.0	New Orleans	3,812	581	15.2
Buffalo	4,127	775	18.8	New York	4,083	723	17.7
Chicago	4,185	825	19.7	Norfolk	4,146	815	19.7
Cincinnati	4,208	901	21.4	Philadelphia	4,078	784	19.2
Cleveland	4,103	715	17.4	Pittsburgh	4,203	758	18.0
Denver	4,199	857	20.4	Portland, Maine	4,021	716	17.8
Detroit	4,195	758	18.1	Portland, Oreg	4,153	764	18.4
Houston	4,304	964	22.4	Richmond, Va	4,338	997	23.0
Indianapolis	4,044	689	17.0	St. Louis	4,112	751	18.3
Jacksonville	4,202	866	20.6	San Francisco	4,263	798	18.7
Kansas City	3,960	683	17.2	Savannah	4,067	746	18.3
Los Angeles	4,311	854	19.8	Scranton	4,002	707	17.7
Manchester, N. H	4,090	765	18.7	Seattle	4,280	804	18.8
Memphis	4,190	865	20.6	Washington, D. C	4,454	1,034	23.2

Two features of these estimates are especially significant: the relatively wide range of housing costs and the importance of shelter in place-to-place differences in the cost of living. Housing as a per-

[7] Workers' Budgets in the United States: City Families and Single Persons, 1946 and 1947, Bull. No. 927, U. S. Department of Labor, Bureau of Labor Statistics, 1948.

centage of the total budget ranged from 15.2 percent in New Orleans to 23.2 percent in Washington, D. C. The estimated annual shelter cost varied from $581 in New Orleans, to $1,034 in Washington, D. C. The budget total, exclusive of housing, varied much less, however, ranging from $3,231 in New Orleans, the lowest cost city, to $3,476 in Seattle, the highest.

These data illustrate the problems faced in assessing the need for Government assistance in this area and in formulating general rules or procedures which will apply equally well in all cities. The budget estimates are based on going rental rates for approximately comparable housing in all cities, plus costs of heat, light, and facilities. Climatic variations, of course, influence both construction and operating costs. The more rigorous climate of the northern areas requires more substantial and costly construction than is needed in the South. Fuel and utilities costs also run higher in the North, as a rule. Local rent levels are primarily affected by the demand for and supply of rental housing, whereas the prices of new houses built for sale reflect changes in costs of materials and labor. It is true, of course, that the supply of rental housing is also effected, in the long run, by costs of construction, but for practical purposes this factor is greatly outweighed by changes in demand.

The difficulty of generalizing about the proper ratio of housing cost to income is illustrated in data gathered by the Bureau of Labor Statistics in its 1950 survey of consumer expenditures. The average purchase prices of homes bought by the families interviewed varied widely and erratically, partly because of the unusual character of the market at that time. A better gage of the variation from city to city in housing costs is provided by the estimated market value of owned homes, also obtained in that survey. The average for all "index" families (wage earner and clerical worker families with incomes under $10,000) was $8,422. The value of owned homes in the large cities (urbanized areas of over 1 million population) averaged $10,024, as against $8,425 in cities of 240,000 to 1 million; $7,613 in cities of 30,500 to 240,000; and $6,457 in places of under 30,500. These differences by city size are related to a considerable degree to income differences. Average incomes in smaller cities are lower than average incomes in the larger cities. At the same time, however, shelter costs are less in small cities because of lower land costs and construction wage rates. Building code requirements are also less stringent as a rule in the smaller than in the larger cities, requiring less costly construction.

The standard budget estimates cited above relate to 1951 conditions. Any effort to project them to a current period must take into account changes in prices and spending habits and possibly shifts in the geographical pattern of housing costs. More important from the standpoint of this inquiry is the comparison of a current budget estimate with current income data to formulate some notion as to how much families in various income brackets should be able to spend for housing and what that will buy in today's market.

One test of the validity of the standard budget estimate is to compare it with independent data based on actual experience. A rough check of this type can be made against Federal Housing Administration reports on the characteristics of one-family home transactions

under section 203 of the National Housing Act. An overall comparison is impossible, because the FHA data pertain to the country as a whole whereas the budget estimates relate to individual cities. Moreover, there are some time discrepancies between the two sets of figures. Nevertheless, with allowance for these differences it is possible to derive some interesting conclusions.

The most appropriate FHA data for a period near that covered by the last estimate of the City Worker's Family Budget relate to the year 1952. The home buyers insured under title 203 in that year had an average effective annual income of $4,811 as estimated by FHA. The estimated median annual housing cost to the home buyer, including mortgage payments, maintenance, and repair, heating and utilities, was $998. For this the buyers obtained, on the average, a house with 5.3 rooms, well up to the budget requirements. Only 1 of the 34 budget cities, Washington, D. C., shows a 1951 housing cost higher than that amount, while the estimate for Richmond, Va., is almost identical with it. The budget total for Richmond was $4,338, or $473 less than the average income of the FHA buyers. Housing expense required 20.7 percent of income in the FHA experience as against 23 percent in the Richmond worker's budget. Allowing for changes in prices between 1951 and 1952 (the housing component in the Consumer Price Index increased about 2 percent between the 2 years), and taking account of conceptual differences (the budget refers to a 4-person family, contains no allowance for savings other than insurance, and provides for rented, rather than owned living quarters) there appears to be a reasonable relationship between the two estimates. In other words, the comparision indicates that the FHA program was helping to support a housing market which, on the average, provided new housing, adequate in size if not in quantity, for moderate-income families. Moreover, the buyers under FHA insurance were not only saving by building up equities in their homes, but they apparently had a greater remaining margin for saving or other consumption than the budget estimates call for. All this may mean, of course, is that the FHA program covers only the best risks. It doesn't tell us how many families needing housing and desiring to buy were unable to qualify.

The most recent available data on FHA new housing operations show that the median incomes of buyers and the cost of the houses has increased. But the houses are larger, both in terms of area and number of rooms. The ratio of housing cost to buyers' income is 19.7 percent, very little changed from the 1952 ratio.

TABLE 57.—*Characteristics of 1-family new home transactions, FHA, sec. 203, 1952 and 1957* [1]

Median	1952	1957
Property value	$10,022	$14,261
Calculated area, square feet	923	1,105
Number of rooms	5.3	5.8
Annual income of mortgagor	$4,811	$6,632
Annual housing expense	$998	$1,382
Expense-income ratio, percent	19.6	19.7

[1] Data from Federal Housing Administration, preliminary draft, 24th annual report, table 37. The expense-income ratio was computed from the averages, rather than the published medians.

The expanded programs for governmental assistance in housing production have been confined largely to public housing for low-income families and aid to privately financed housing through the Federal Housing Administration loan-insurance program and the veterans' loan-guaranty program. In 1956 approximately 17 percent of all new privately financed nonfarm housing units started were covered by FHA-insured mortgages and 25 percent by VA-guaranteed loans.[9] These figures include both single-family houses and apartments. The FHA program, which has been in effect since 1934, offers assistance to all buyers who meet the income requirements and whose properties conform to prescribed quality standards. The VA program is limited to qualified veterans of World War II and Korea, but provides more liberal loan ratios at lower interest rates.

In attempting to answer the question, "How effective is the present Federal loan-insurance program in supporting production of housing meeting the needs of the population at reasonable prices?" consideration must be given to (1) the selling prices of new houses; (2) the extent to which FHA-insured or VA-guaranteed loans are involved; and (3) current family incomes. The following table compares selling prices of new 1-family houses built in urban areas of the United States during the first quarter of 1956 with the estimated values of new houses purchased in 1956 and financed with FHA-insured and VA-guaranteed loans.[10]

TABLE 58.—*Distribution of selling price of 1-family houses for all units, FHA-insured units, and VA-guaranteed units, 1956*

[Percentage]

Price range	Total units built	FHA-insured units	VA-guaranteed units
Less than $7,000	4	(1)	(1)
$7,000 to $9,999	10	15	10
$10,000 to $11,999	13	21	24
$12,000 to $14,999	27	34	42
$15,000 to $19,999	26	26	21
$20,000 and over	18	4	3
Unknown	2	0	0

[1] Less than 0.5 percent.

It is estimated that there were about 980,000 privately financed one-family, nonfarm houses started in 1956. About 19 percent of these units were started under FHA home mortgage programs, chiefly section 203. The above figures indicate that the FHA program was most influential in the price ranges from $7,000 to $20,000. This is to be expected, because of the limited need for financing assistance for the high-priced units, and the marginal character of many properties valued at under $7,000 which disqualifies them for assistance. The data suggest that somewhat over one-fourth of the new units in the $10,000 to $15,000 range were covered by FHA-insured loans.

[9] Housing and Home Finance Agency, Housing Statistics, September 1958, p. 9.

[10] Data from BLS report, Characteristics of New Housing, First Quarter, 1956; Federal Housing Administration, 23d Annual Report, table III–45, p. 69; and Veterans' Administration monthly statistical summary reports on the loan guaranty program. The VA data relate to "new and proposed homes."

Approximately 27 percent of the 980,000 new privately financed 1-family dwellings started in 1956 were covered by VA-guaranteed loans. Two-thirds of these loans were made on properties valued at from $10,000 to $15,000. It can be seen from these figures that about two-thirds of all one-family houses in this middle range were financed with insured or guaranteed loans. Properties in the price range from $7,000 to $10,000 accounted for only 10 percent of total production, but over half of them were covered by insured or guaranteed loans. It appears, therefore, that the program was being applied effectively to relatively low-cost housing to the extent that the builders were offering properties in those price ranges.

The following table summarizes relevant data on the financial characteristics of new house transactions in 1956, in relation to family incomes. The distribution of families by income is based on estimates by the Bureau of the Census for families of two or more persons in urban areas. The FHA and VA estimates of house purchases by income of buyer do not conform precisely to the income class limits used by the census, but the data are sufficiently similar to provide a valid indication of the extent to which families in various income ranges benefit from the Federal programs. The buyers of FHA or VA insured units may be either single persons or heads of families, but the number of single buyers is probably too small to affect the data significantly. A further qualification attaches to the VA estimates of financial characteristics. These are based on "prior approval home loans," representing direct applications by individual buyers of both new and existing houses. These applications provide about 75 percent of total VA activity in guaranteed loans.

The FHA and VA estimates of the ratio of housing expense to income are of interest because they show the remarkably consistent pattern of declining ratios of housing costs as income rises. The VA ratios are based on income after taxes, and are therefore somewhat higher than the FHA data. For comparison, the BLS estimates of housing expenditures as percentage of total expenditures derived from the 1950 consumption study, are also shown. In all cases, housing costs include heat and utilities.

TABLE 59.—*Financial characteristics of house purchase transactions, 1956*

Income class	Percentage distribution of urban families by income [1]	Percentage distribution of houses by income of purchaser [2]		Estimated annual housing expense as percentage of annual income		Housing costs as percentage of annual income after taxes 1950 [3]
		FHA	VA	FHA buyer	VA buyer	
Less than $2,000	10.4	(4)				41.1
$2,000 to $2,999	8.7	0.3		[5] 32.8		34.1
$3,000 to $3,999	11.8	6.1	[5] 5.8	28.5	[5] 31.6	27.9
$4,000 to $4,999	15.9	20.0	31.8	25.5	27.6	24.3
$5,000 to $5,999	14.5	21.4	28.0	22.6	24.0	24.4
$6,000 to $6,999	10.6	19.0	17.1	20.0	20.9	21.5
$7,000 to $9,999	18.5	25.7	13.5	17.1	17.7	17.0
$10,000 and over	9.6	7.5	3.8	13.7	13.8	15.8
Median income	$5,221					

[1] Census Bureau estimates, all urban families of 2 or more persons. Current Population Reports—Consumer Income, series P–60, No. 27.
[2] FHA data from 23d Annual Report of Federal Housing Administration. VA data from Loan Guaranty Highlights, March 1958.
[3] Data from BLS Survey of Consumer Expenditures in 1950.
[4] Less than 0.05 percent.
[5] Under $3,600.
[6] Under $3,000.

The table reveals that very few families with incomes under $3,000 bought homes under the FHA and VA programs. Some, no doubt, were able to buy housing under conventional financing arrangements. In addition, about one-half of 1 percent of the FHA loans on existing houses were made to buyers with under $3,000 income. Similarly, a small percentage of VA guaranteed loans were probably made to low-income buyers of existing homes, but the published reports do not provide an exact figure.

The age and occupational status of the low-income families obviously have an important bearing on their housing problems. According to the sample surveys of consumer finances, conducted by the Federal Reserve Board, in about one-half of the urban families with incomes under $2,000 in 1954 the family head was 55 years of age or older. About one-fourth of all family heads in this income group were retired. Surveys by the Bureau of Labor Statistics have revealed a very high incidence of homeownership among these older, low-income families. The 1950 study of family expenditures produced the following data:

TABLE 60.—*Percent of families reporting expenditures on owned homes—age of head, by income level*

Income	Percent of families reporting expenditures on owned homes—age of head		
	55 to 65	65 to 75	75 and over
Under $1,000	44	46	47
$1,000 and under $2,000	47	52	58
$2,000 and under $3,000	51	66	73

The explanation appears to lie in the fact that these families have acquired homes at an earlier stage in family life, when the family head, and possibly other members of the family unit, were earning relatively high incomes. In later years income has dropped but the family has been able to retain its home, probably in many cases by recourse to savings and other assets, the use of which is not included in current income accounting.

Aside from the special group of older families in owned homes, however, there exists a sizable number of low-income families whose housing requirements are probably not being adequately met and who have no hope of acquiring adequate shelter through normal channels. The size of this problem is indicated by a Franklin D. Roosevelt Foundation study which estimated that "the economic resources of over 6 million urban consumer units were too limited to provide an adequate level of living in 1950." [11]

SUMMARY AND CONCLUSIONS

1. The proportion of family income spent for housing tends to decrease as income rises.

2. Conversely, the relative burden of housing costs increases when the family's income declines.

[11] Characteristics of the Low Income Population, Joint Committee on the Economic Report, Committee Print. 84th Cong., 1st sess., p. 48.

3. American families have a strong urge toward house ownership. While the costs of rental and owner-occupied quarters of equivalent size and quality tend to be about equal, the homeowners in any urban group tend to spend more because they pay for better housing.

4. The cost of housing varies significantly from place to place. It is the major factor in the differences in the cost of living among cities.

5. The costs of meeting acceptable housing standards tend to be lower in the smaller than in the larger cities.

6. Although the bulk of the housing need can be met in the future, as in the past, by private builders, operating for a profit, there remains a segment of the population with substandard incomes who will require special Government assistance if they are to occupy housing meeting reasonable standards.

D. Credit Terms

CREDIT TERMS AND EFFECTIVE DEMAND FOR NEW HOUSING

CHARLES ABRAMS, Visiting Professor, Massachusetts Institute of Technology, Cambridge, Mass., and MORTON SCHUSSHEIM, Director of Research, State Rent Commission, New York

This memorandum was prepared in response to the following questions:

> What are the effects of credit terms—downpayment, maturity, interest rate—on the demand for residential construction?
>
> What are the broad economic policy considerations critical to a determination of maximum limits of loan-to-value ratios and length of maturities in conventional loan programs and Government insured or guaranteed loan programs?
>
> What are the underwriting considerations critical to a determination of maximum limits of loan-to-value ratios and length of maturities in conventional loan programs and Government insured or guaranteed loan programs?

The pressure of other official responsibilities has made it difficult for us in the time allotted to prepare a comprehensive paper embracing all the relevant aspects of this involved subject. However, we should like to submit a preliminary analysis which may be useful in the preparation of legislation. We shall try to amplify the analysis at a later time.

THE LIMITATIONS OF PRESENT FINANCING MECHANISMS

The main point we wish to emphasize is that current federally aided financing and mortgage insurance programs do not meet the needs of families most in need of housing. A large portion of these families are provided for neither in the homeownership nor in the rental housing programs of the Federal Government.

During 1957, only 5.7 percent of all new single-family homes insured by FHA were purchased by families with an effective income of $4,200 annually or less.

The median effective income of purchasers of single-family FHA-aided homes was approximately $6,600 annually.

The median income (before taxes) of spending units [1] in the United States in 1957, according to the Survey of Consumer Finances, was only $4,350 annually and only 31 percent of all families had incomes of $6,000 a year or more.[2]

[1] A spending unit as defined in the Survey of Consumer Finances, consists of all related persons living together who pool their incomes.

[2] Federal Reserve Bulletin, September 1958, p. 1051.

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In other words, half of all families in the United States had an income of less than $4,350 in 1957, while less than 6 percent of all new one-family homes purchased with FHA insurance in the same year were bought by families with annual incomes of less than $4,200. The cost of new private single-family homes started in 1957 averaged $13,025 which is far beyond the reach of lower-income families.

What is indicated and what has been supported by the legislative findings of the Congress at various times is that a large proportion of the population is presently outside the market for new housing.

The programs of the Federal Government which have been designed for the lowest income segment of these families have, moreover, provided subsidized public housing which has been so small in amount that it hardly provides for a tiny fraction of the need. Moreover, the program affords these families access only to rental housing. Finally such rental housing is available only in the cities (mostly the larger cities) and not in the smaller cities or suburban areas, where many of them live or prefer to live. It should be manifest that any program designed for families in the United States should include provisions both for rental and ownership, and be available wherever these families are employed.

This analysis will deal only with the limited question of how Federal programs can make homeownership available to some of the families now removed from the benefits of Federal insurance programs.

THE IMPACT OF FINANCING ON ABILITY TO BUY HOMES

An analysis of existing FHA–aided programs will show that interest and amortization are the main items in the cost of homeownership and in the ability to buy a home.

Every interest reduction of 1 percent on a 25-year $14,000 mortgage (90 percent of cost) would reduce mortgage charges by about $100 annually. An extension of the mortgage from 25 to 35 years would mean a reduction of another $140. Elimination of the ½-percent premium charge would reduce it another $50. Add it all up and the savings annually would be $290. Building costs would have to be cut by $4,000 to effect the same saving.

The following table shows the estimated monthly housing expense on a house in the Northeast with a $14,000 mortgage.

TABLE 61.—*Cost items FHA loan; 30 years, 5¾-percent interest*

Interest and amortization	$82
Heat	20
Insurance	5
Taxes	25
Utilities	10
Maintenance	15
Total	157

Assuming that as much as 25 percent of income can be spent on housing, the required gross annual income for this home would be $7,536 which is far above the median income of American families. It may be noted that the mortgage charges constitute more than 52 percent of the gross carrying charges. It may also be noted that all of the other charges are relatively fixed though they may vary between

areas, climates, and tax jurisdictions. While cost reduction in the house would play a material part in carving out new categories of income groups to whom new housing might be made available, there is no indication at this time of any changes in home-building techniques which would cut cost materially.

If there is to be any progress toward making new housing available to lower income families, it is primarily through a reduction in the carrying charges of the mortgage that it can be achieved.

The following table shows the effect of various reductions on carrying charges of the home and on the income groups that would be served by such reductions:

TABLE 62.—*Estimated monthly housing expense and required annual income*

[House in Northeast, Mortgage of $14,000]

Cost items	FHA loan, 30 years, 5¾ percent	3 percent loan, 35 years	2 percent loan, 35 years	0 percent loan, 35 years	0 percent loan, 45 years
Interest and amortization	$82	$54	$46	$33	$26
Heat	20	20	20	20	20
Insurance	5	5	5	5	5
Real-estate taxes	25	25	25	25	25
Utilities	10	10	10	10	10
Maintenance	15	15	15	15	15
Total	157	129	121	108	101
Required gross annual income [1]	7,536	6,192	5,808	5,184	4,848

[1] Assumes that ¼ of monthly income is spent on housing.

The assumption, of course, is made on the basis of home cost in the more expensive areas. In areas where home costs are lower, wages will also be lower. But the gap between income and house cost is nationwide, though the figures of home cost, carrying cost, and income may vary. If lower income families are to be reached by federally aided housing programs, it is through lower mortgage charges that the most important reductions will be achievable.

Another example based upon financial characteristics of purchasers of single family homes under FHA's section 203 would indicate the following:

TABLE 63.—*Estimated monthly housing expense and required annual income*

[Composite for Nation, mortgage of $12,000]

Cost items [1]	FHA loan, 25 years, 5¾ percent	3 percent loan, 35 years	2 percent loan, 35 years	0 percent loan, 35 years	0 percent loan, 45 years
Interest and amortization	$76	$46	$40	$29	$22
Real estate taxes	18	18	18	18	18
Heat and other expenses	25	25	25	25	25
Total	119	89	83	72	65
Required gross annual income [2]	5,712	4,272	3,984	3,456	3,120

[1] Based partly upon financial characteristics of mortgagors and properties, new homes purchased with FHA sec. 203 insurance in 1957. Housing and Home Finance Agency, 11th Annual Report, 1957, table III–53, p. 116.

[2] Assumes that one-fourth of monthly income is spent on housing.

This example suggests that mortgage charge reductions can make housing available to the substantially lower levels of income.

The main problem, however, is that mortgage charges everywhere are relatively rigid when the mortgages are financed through private funds. If the market for homes is to be widened, lower interest loans and longer amortization periods which constitute the most tractable items under a publicly aided program can be arranged only through Government financing.

Such direct financing by Government units to aid lower income families is not new. It is the policy in Scandinavian countries. It has been undertaken under programs in New York State, New York City, Pennsylvania, Connecticut, and elsewhere. Funds have either been made available directly or money has been borrowed on the credit of the States and local governments.

But it has not been the usual policy of the Federal Government except in some aspects of the low-rent housing program in which loans were authorized directly through the Government for reloan to local housing authorities.

Loans have been made however, under title IV of the Housing Act of 1950, directly to institutions of higher education at rates which have varied between 2¾ and 3 percent in the past 3 years. Such loans are made through the Community Facilities Administration and have totaled about $563 million by the end of 1957. Low-rate loans were also provided to aid farm purchase by farm tenants under the Bankhead-Jones Farm Tenant Act of 1937. Loans under this act could be granted in amounts almost equaling the full value of the farm to be purchased. The interest rate was 3 percent, the repayment period up to 40 years with provision for variable payments in accordance with farm conditions.

Essentially, the advisability of such a policy for nonfarm housing reduces itself to a political question. Federal loans have been made to business operations and Federal credit has been used to aid commodity, banking, and other operations. The issue is whether a system of direct Government loans should be made to lower income families.

Federal aid to low-income families has been accepted in the Government's low-rental housing undertakings where direct annual subsidies are made available to local housing authorities. The main emphasis of this program has been on rental housing. The lower income families, however, have as active a desire for ownership, if not a greater desire and need for it. A substantial fraction of slum-dwellers have, in fact, been homeowners and the impact of slum-clearance operations in their cases has often been to deprive them of the ownership they enjoyed and to relegate them to a tenancy relationship they did not want but which afforded them no alternative.

Objections to direct Federal loans center mainly around the argument that they are competitive with private operations. But the argument would fail if direct Federal loans are confined to groups whom the private mortgage market does not serve and to disposition of the loans when they no longer require the Government's aid. The loans, in other words, would be sold when the interest rate equaled the market rate. (See Variability of interest rates under the program, post.) Assumption of responsibility to aid in the procurement of life's essentials, those whom private enterprise does not serve has been accepted as a principle in almost every advanced society.

The force of the objection that such a program might inflate building costs depends on the volume of such housing that is annually authorized. If, for example, the program called for 100,000 such starts annually, it would not materially affect building costs in a total program of 1 million to 1,400,000 starts.

In view of the lag in the number of starts in recent years, in fact, it might well be argued that a supplemental program of this sort with an assured market would promote the stabilization of residential construction.

The claim might also be made that 100,000 starts through direct loans would entail Government borrowing to the extent of $1,300 million annually. The program proposed, however, should anticipate borrowings not through the Treasury but through a Government corporation specially set up for the purpose. Such a corporation would have borrowing powers similar to those of the FNMA, the home loan banks and Federal land banks. The Government would undertake to appropriate annually to the new corporation the annual deficit incurred by it through loans. Thus on every $1.3 billion loaned, the maximum annual contribution by the Government would be $39 million and it can be safely anticipated that it would be much less since only a fraction of the loans would be at 0 percent and many would be at 1, 2, and 3 percent.

This formula would moreover, be financed by bond-purchasers subject to Federal tax, whereas bonds floated by local governments and public-housing agencies are tax-exempt and purchasable by those in the larger brackets of income who escape the substantial contributions to the support of Government which they would and should ordinarily pay.

VARIABILITY OF INTEREST RATES UNDER THE PROGRAM

The more favorable the terms of interest and amortization, the lower of course, would be the income levels of the family groups aided. The question arises as to whether the interest rate under the program should be at a fixed amount throughout the loan term. Manifestly if a low interest were fixed indefinitely, the home-buying family could sell the home at a profit or its income might increase and its mortgage warrant a higher rate. Legislation should therefore provide for a fixed initial rate, e. g. for 3 years, with a reexamination of the rate periodically thereafter. Thus interest rates would be geared to capacity to pay. When, as, and if the family can pay the market rate, the Government agency could thereafter dispose of the loan to private lenders or possibly to FNMA.

It is best too, that while the mortgage amortization might be in amounts geared to a long-term loan, the nominal due date should be for 15–25 years with provision for extension of the loans to the maximum period if circumstances warrant. It is probable that a portion of the families would become economic owners and able to pay the going rate before the ultimate due date of the mortgage paper.

Resales of the homes would be permitted only with the consent of the Government corporation. Such resales would be allowed if the would-be new owners qualify as low-income families or if the purchasers can arrange to assume the mortgage payments on economic terms.

The means test, of course, is not without its faults though it is used in the low rental housing program. Its main defect, however, is that when the family's income increases to a determined amount, the family is forced to vacate the project. This imposes considerable hardship on the family by forcing it to give up its home, friends, and neighbors as well as take its children out of the neighborhood school. It also tends to institutionalize projects. These objections would be eliminated under the program proposed. The family would remain, but would simply be required to pay a higher rate of interest when its income warranted it. The most serious objection to the means test would thereby be eliminated. The homes, moreover, would be distributed instead of being part of "project communities."

We believe that publicly aided rental housing is essential. But as long as the Federal housing programs ignore home ownership for the low-income family, they can hardly be said to be "comprehensive" or even inclusive. At best it can be said that Federal credits under the FHA program are being employed for the upper rather than the lower ranks of wage earners. Justification for the vast Government assistance now being extended would be greater if lower levels among the income groups were to be included as beneficiaries of Government mortgage aid. The proposal outlined is intended to suggest a move in that direction.

[NOTE.—Mr. S. Durward Badgley, director of real estate and mortgage research, Mutual Life Insurance Company of New York, New York, N. Y., was requested to prepare a paper on this topic. This paper was not received in time for publication in the compendium. Arrangements have been made for inclusion of the paper in the record of the public hearings which will be held subsequently.]

CREDIT TERMS AND DEMAND FOR RESIDENTIAL CONSTRUCTION

RAMSAY WOOD, Division of Research and Statistics, Federal Reserve Board[1]

This paper was prepared in response to the following questions:

> What are the effects of credit terms—downpayment, maturity, interest rate—on the demand for residential construction?
>
> What are the broad economic policy considerations critical to a determination of maximum limits of loan-to-value ratios and length of maturities in conventional loan programs and Government insured or guaranteed loan programs?
>
> What are the underwriting considerations critical to a determination of maximum limits of loan-to-value ratios and length of maturities in conventional loan programs and Government insured or guaranteed loan programs?

The terms on which mortgage credit is available affect the purchasing power of the resources available to buyers and would-be buyers of residential real estate. Relaxation or liberalization of terms is usually thought to consist of changes in terms that lower the monthly payment needed to pay off an amortized mortgage of a particular size, or that increase the amount of the purchase price that can be borrowed, thus reducing the amount of assets the buyer must part with at the time of purchase. Tightening of terms is usually thought to be represented by changes that have the opposite effect—that require larger monthly payments per $1,000 of debt, or larger proportions of downpayment to price.

These characterizations are also thought of as implying corresponding changes in the amount or quality of housing space that can be purchased—that more and better housing can or will be bought under liberal than under tight terms. They are also thought to imply changes in the kind of buyer who will be able to get housing—the poor under liberal terms, the rich under tight terms—or the kind of housing that will be sold or built—low-cost housing under liberal terms, high-cost housing under tight terms. The characterizations are also considered to be related to the amount of additions made to the housing stock in that liberal terms encourage building and tight terms discourage it.

For the most part these characterizations appear to be derived from consideration of the effects of liberal or tight terms on an individual person or family. Clearly, a family can buy more housing and more expensive housing, can buy on a smaller income and with fewer assets, and stands a better chance of having a new house built for itself, if

[1] This paper, by Ramsay Wood, an economist in the Division of Research and Statistics, Board of Governors of the Federal Reserve System, is an expression of the author's views. It does not necessarily represent the views of the Board of Governors.

it has special access to liberal terms than if it has to get along with tight terms. That the same consequences follow for all families if liberal terms are available to all as would attend one family that had special access to such terms is not clear.

THE MARKET SETTING

Demands for residential real estate work themselves out in a market, in most respects in the same way as demands for other goods and services do. One characteristic of the kind of markets with which we are most familiar in the United States is that the lower the price of a particular commodity or service, the more of that commodity or service is likely to be purchased, and the higher the price, the more is likely to be offered for sale. Two consequences of this characteristic are that the would-be buyer prepared to pay the highest price is most likely, though not certain, to have his demand satisfied; and the would-be seller prepared to accept the lowest price is most likely, though not certain, to be able to sell his wares. The outcome is not certain because, if the highest price bid is below the lowest price any supplier will accept, no transaction will take place.

Another characteristic of our markets is that, in most cases, the amount of a particular good or service available for sale is not immediately or indefinitely expansible. Supplies are finite, and to make additional supplies available takes time. Perhaps more important, for most things most of the time expansion of supply tends to be increasingly costly. This is because expansion of supply requires that additional labor, materials, and capital be attracted to this line of activity from lines in which they are already employed. Ordinarily this reallocation of resources will be carried out by the market process of offering higher wages and prices than are being paid for the resources in their current use.

Real estate markets share these characteristics with most other markets. In one respect, however, real estate markets differ in degree from most other markets: practically all of the current demand for use of real estate is, and must be, satisfied by the existing supply. In the residential real estate market this may be illustrated by the fact that of the roughly 52 million dwelling units now occupied, only about 1 million, or less than 2 percent, were constructed in the past year; to increase the proportion of housing demand being satisfied by new supplies to, say, 5 percent a year hence, would clearly require that very large amounts of labor, materials, and capital be attracted to this line of production.

THE ANALYTICAL PROCEDURE

This paper is an attempt, in the limited time available, to suggest how changes in credit terms affect the working out of the forces of demand and supply in markets of the sort just described. We start with an example of how prices, the number of transactions, and the amount of building would be determined under a particular set of credit conditions. We then assume that credit terms are relaxed by stages, and examine how things would work out at each stage. At the end, some of the consequences for the use of credit and for the amount of mortgage debt outstanding are taken up; and the impli-

cations of these consequences in an economy pressing hard on its supply of savings are examined.

The object of this procedure is to present a picture of how certain important market forces operate on each other to produce market results; namely, that transactions take place and prices are arrived at. Most of the numbers used to describe the markets are hypothetical, and certain elements operating in real markets have been neglected, partly because of limitations of time, but more important, because introducing them would obscure the mechanisms being examined here. Perhaps the most important elements neglected are the changes in expectations, and the income effects, that might follow certain of the developments traced in the examples. Another element neglected is what sellers of houses do about finding housing.

The fact that the markets described are hypothetical means that the precise consequences in any particular case should not be taken as applying directly to the real world. This does not mean, however, that the *tendencies* described should be discounted. The conclusions summarized below are drawn from the tendencies exemplified in the cases considered.

SUMMARY OF CONCLUSIONS

With a few exceptions that will be noted in the analysis of some cases, conclusions or generalizations in this summary and elsewhere in the paper about effects and outcomes under "liberal," "relaxed," or "easier" terms compared with those under "tight" or "less liberal" terms are to be interpreted as referring to alternatives, not to time sequences. That is, we are comparing "what would happen" under one set of credit conditions with "what would happen" under another set, both in the same situation as far as other elements are concerned. We are not, for example, generalizing about market behavior under liberal terms in a depression compared with that under tight terms in a boom.

1. Directly, a change in credit terms will affect those bidders who use credit, and will affect most those who use most credit.
2. Indirectly, a change in credit terms will affect those bidders who pay all cash, or a large proportion of cash, by affecting the prices of houses.

Thus, making credit available on easier terms is not analogous to giving everyone a cash gift, for example, or to reducing the prices of houses. On the contrary, easier terms give an immediate advantage to only some bidders, and will usually result in higher prices than would prevail under less liberal terms.

3. Relaxed credit terms give a short-run advantage to those bidders prepared to pay for a house out of income, and put at a disadvantage those bidders prepared to exchange accumulated assets for a house.

This does not necessarily mean that easier terms give low-income or elderly families, for example, an advantage over the well-to-do or the young. Elderly families frequently, and low-income families sometimes, have appreciable accumulated assets, but meager prospective income. Young families, on the other hand, often have relatively few assets but good prospects for future income.

4. The extent of these advantages and disadvantages depends to a large extent on the composition of the relaxation of credit terms, as well as on the composition of demand and of supply.

If the relaxation is solely a matter of reducing the monthly payment per $1,000 of mortgage without reducing required downpayments or mortgage interest rates, for example, the advantage to credit bidders may be smaller than if the relaxation takes another form. The effect will also depend in part on the composition of bidders' resources (income and assets) and on the strength of their preferences for assets other than equity in real estate, and on the prices demanded by sellers.

5. With any given composition of demand and of supply, the credit terms available largely determine the level of values for the standing stock of houses.

6. The level of values established for the standing stock of houses under a new set of credit terms plays a large part in determining the amount of new building that will be done at any given level of construction costs.

7. The level of construction costs plays a large part in determining how much turnover of the standing stock there will be at the level of values for the standing stock established by a new set of credit terms.

The mere fact that bidders in the market are willing to pay as much for a new house as the cost of building it does not mean that the new house will be built. If existing houses that are equally acceptable to the bidders are available at lower prices, the bidders will tend to buy the existing houses. If relaxed credit terms raise the prices of existing houses above the cost of new building, however, bidders will be likely to buy the new and thus encourage building.

Similarly, the existence of a bidder prepared to pay the price demanded by the owner of an existing house does not assure that the existing house will be sold. If the bidder can buy a new house that is equally acceptable at a lower price, he will tend to buy the new house, thus keeping turnover of existing houses below what it would be with higher construction costs.

8. Relaxation of credit terms that results in a level of values for the standing stock substantially above the level of building costs is likely to result in a large and rapid increase in new building, accompanied by a sharp rise in building costs.

A large margin between the price put on existing houses by the going credit terms and the cost of building is likely both to make bidders prefer new to old houses and to require builders to bid resources away from other activities. These two influences tend to work together to result in rising costs. A smaller margin between the level of values for the existing stock and construction costs is likely to induce cost-reducing efficiencies to prevent the margin from being wiped out by market developments.

9. The advantage that a change to liberal terms ordinarily gives credit bidders over cash bidders will tend to result in a greater use of credit than under the tight terms.

This is likely to be so both because a greater number of transactions are likely to involve use of credit, and because prices are likely to be higher, and to require more credit per credit transaction.

10. If one aspect of relaxed credit terms is a lower mortgage interest rate relative to other rates, transactions are likely to take place with smaller downpayments, so that use of credit per transaction is likely to be higher.

If the mortgage interest rate is reduced below the rate of income bidders can earn on funds invested in assets other than real estate equities, there will be a tendency for purchasers of houses to keep their downpayments as low as possible. They will borrow as much as possible at the low mortgage rate in order to be able to earn as much as possible at the higher investment rate.

11. More transactions are likely to take place under liberal terms than under tight terms, at least for a time after the change, with a consequent greater use of credit from this source.

12. If maturities are longer under liberal than under less liberal credit terms, the volume of debt outstanding as a result of any given rate of lending will be greater under the liberal than under the less liberal terms.

RELATION TO LIMITS OF RELAXATION

The outstanding conclusion that emerges from all this is that relaxed terms are likely to result in greater use of credit. Furthermore, except in the unlikely event that relaxation is obtained with shortened mortgage maturities, this increased use of credit will give rise to increased amounts of mortgage debt outstanding.

This is the effect that probably brings into play the basic economic limit to relaxation of mortgage credit terms. Under liberal terms, savers and other investors are being asked to keep a larger amount of investable funds invested in mortgages than they would be asked to keep under less liberal terms. In an economic situation characterized by relatively little competition for capital funds, they may increase their holdings of mortgages with no increase in the rate of return so long as the rate of return is higher than that on alternative investments.

In an economic situation characterized by strong competition from governments, business enterprises, and consumers for capital funds, and a consequent rise in market interest rates, however, an increase in the rate of return on mortgages may be necessary just to induce savers and investors not to reduce their holdings of mortgages. To induce them to increase their holdings in such a situation may require quite a sharp rise in the rate of return on mortgages.

The major alternative to rising interest rates in a highly competitive market for savings is to increase the amount of savings available for investment. In recent years increased savings have been made available, partly from income and partly by diversion of liquid balances and near-liquid balances, to long-term investment.

Another source of increased savings for the real estate market is real estate owners and buyers themselves. Requiring purchasers to make larger downpayments and to pay their mortgages off faster would eventually help to reduce the amount of the economy's savings that savers other than real estate owners are called on to tie up in mortgages on real estate. Use of this source of savings would also tend to reduce the absolute amount of savings needed altogether—that is, would tend to restrain one force making for steadily rising real estate values and construction costs.

MARKET EFFECTS OF MORTGAGE CREDIT TERMS

In this section we shall attempt to examine some of the market mechanisms through which mortgage credit terms affect the prices at which residential real estate is bought and sold, the number of transactions that take place, and the amount of new building that occurs. We shall also attempt to see the kind of bidders who are successful in buying under different circumstances, and the kind of owners who are successful in selling.

Our method is to assume a market in which would-be buyers and would-be sellers of houses have particular characteristics relevant for the analysis. We assume that mortgage credit is available on terms which, by present-day standards, would probably be thought of as tight, and see how transactions would take place. We next assume that credit terms are relaxed, first by reduction of the monthly payment required to amortize a mortgage of $1,000, then by reduction of the proportion of the price a buyer is required to pay in cash. We then consider the effect that different levels of interest rates may have on the situations described.

Perhaps we should explain one of our assumptions more fully than the others. We assume that there are bidders in the market who are concerned little, if at all, about the price of the house for which they are bidding. What they are concerned about is the amount they will have to pay each month for debt service, on the one hand, and the amount of cash they must part with in the way of downpayment, on the other. The reader must bear in mind that, though cash bidders have maximum prices that they will pay, credit bidders have two maximum amounts they will pay: a maximum amount per month for the life of the mortgage and a maximum downpayment to be made at the time of purchase.

The credit bidder need not be aware that, under a given set of credit terms, the maximum monthly payment and the maximum downpayment he is prepared to pay together imply a price in the ordinary sense. This is the case, however, and in our analysis we must translate these two elements into a price in the same sense as that used by the cash bidder and the seller.

It should also be noted that each element of the credit bidder's bid limits him independently. For example, if a credit bidder is prepared to pay as much as $8.25 per month and as much as $500 down, he would not be able to bid for a house that requires $600 down, even though the monthly payment required were only $7.75 per month. This would still be the case if the cash price were below the implied price he is willing to pay under going credit terms.

The remaining assumptions we make to simplify analysis are:

1. In our market at the start are 360 existing houses, all alike as far as the tastes of prospective buyers ars concerned.
2. All houses are continuously occupied, that is, there are no vacancies.
3. All houses are occupied by their owners.
4. All owners are prepared to sell at any time if they are offered their "reservation prices," which vary from one owner to another, but which do not vary with terms and conditions in the housing market.

5. Each month, 1 non-home-owning family finds it has $2,000 in cash which it is prepared to pay for a house; another finds it has $900 which it is prepared to "pay down" for a house. The first family is unwilling to undertake to make any monthly payment; the second is prepared to make a monthly payment of $8.50.

6. Each month, 2 home-owning families decide they are prepared to sell their houses provided they can get a price of not less than $1,667.

7. For a long time, mortgages have been available for 60 percent of the purchase price, at 6-percent interest, and amortized by level monthly payments for 15 years.

8. Financing costs are the only costs of owning and occupying these houses.

9. Although all families have the same tastes in housing, some are willing to pay more than others for housing; they have different preferences for paying in cash and monthly debt service; and what each family is willing to pay is not affected by terms and conditions in the housing market.

10. Some families—who are prepared to pay less than the going prices for owner occupancy—rent space in the houses of other owner-occupants.

11. People competent to build new houses build only houses identical to those standing.

12. Building requires no appreciable time.

13. If a builder builds a house for his own account he must sell it immediately at whatever price he can get.[2]

14. If a builder contracts ahead of time to build for a particular owner, he may not accept a price lower than his costs, excluding profit above his own wages in calculating costs.

15. Unlike the prices owners are prepared to accept and the prices bidders are prepared to pay, the costs builders must pay are influenced by developments on both the demand side and the supply side of the market.[2]

16. All houses that change hands in a given month do so at the same price.

MONTHLY PAYMENTS OR CASH PAYMENTS THE ONLY PRICE ELEMENTS FOR BUYERS

In our first set of examples we shall consider that for those would-be buyers who would finance a purchase with mortgage credit, the only element to be considered is the monthly payment required to amortize the mortgage. This means that they are able and willing to make whatever downpayment is required to supplement the mortgage that their monthly payment will support. For the would-be buyers who would pay all cash, of course, the cash price is the only element to be considered.

Since these monthly payments and prices are not affected by the terms and conditions prevailing in the market, we can set out a sched-

[2] The author was unable to develop the implications of assumptions 13 and 15 in the time available. He has decided to leave the assumptions here, however, since they express pertinent conditions that the reader may feel inclined to explore.

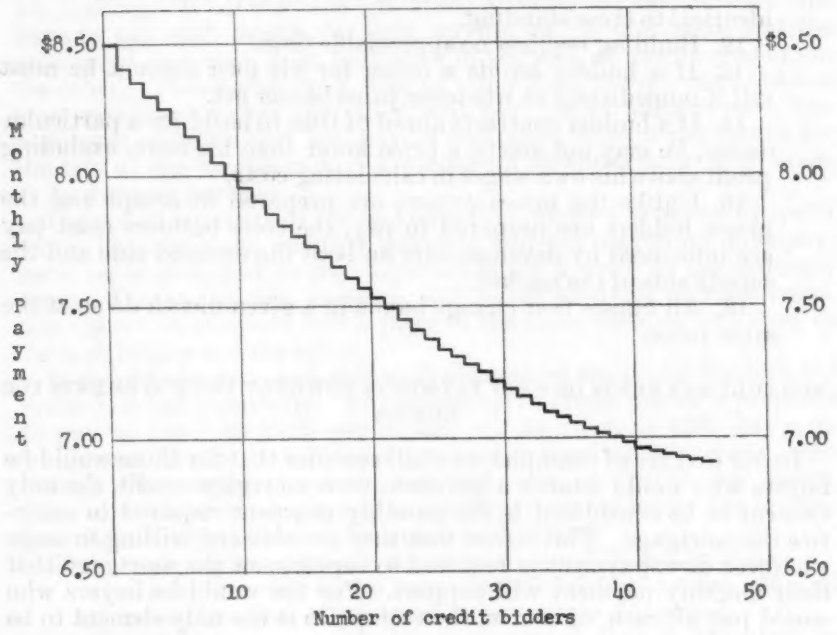
ule showing the number of bidders willing to buy at each monthly payment and at each price. A portion of the schedule we shall use is shown in table 64 and in figures 4 and 5.

TABLE 64.—*Demand schedule—Number of credit bidders prepared to make stated monthly payments, and number of cash bidders prepared to pay stated prices*

Credit bidders		Cash bidders	
At an amount not greater than (per month)—	The number of bidders is—	At a price not higher than—	The number of bidders is—
$8.50	1	$2,000	1
8.40	2	1,600	2
8.35	3	1,500	3
8.30	4	1,400	5
8.25	5	1,300	8
8.20	6	1,200	12
8.15	7	1,100	16
8.10	8	1,000	20
8.05	9	----------	----------
8.00	10	----------	----------

FIGURE 4.

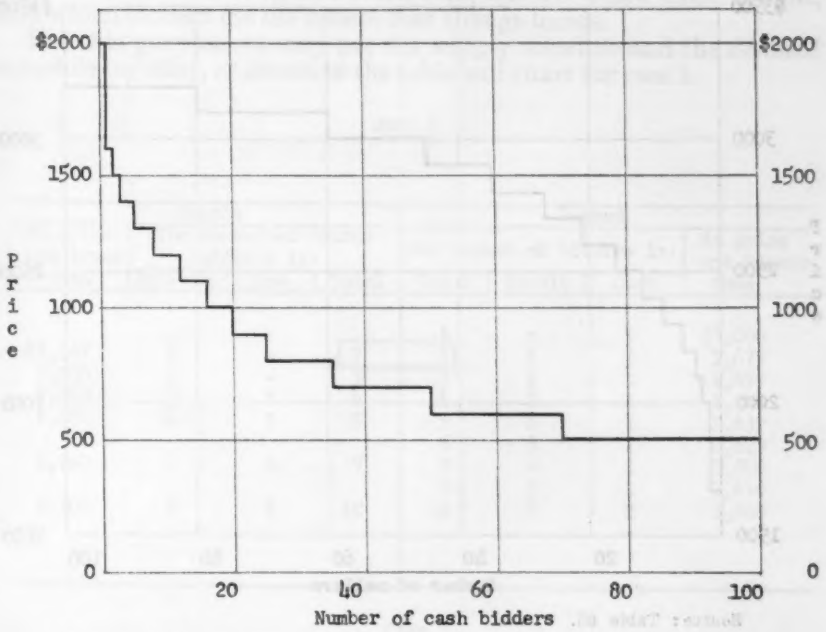
Number of Credit Bidders Prepared to Make Stated Monthly Payments



Source: Table 64.

FIGURE 5.

Number of Cash Bidders Prepared to Pay Stated Prices



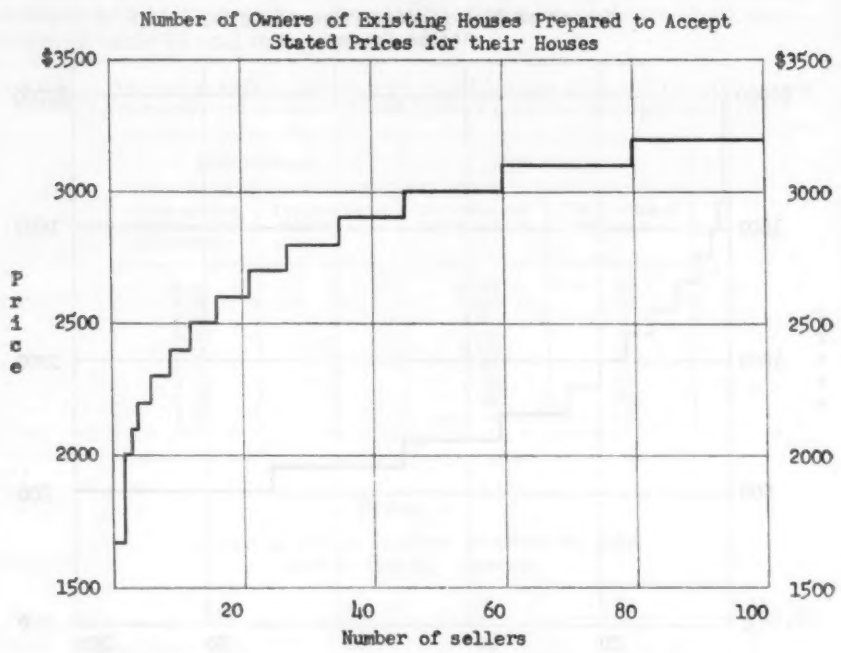
Source: Table 64.

Sellers, on the other hand, couch their "reservation prices," or the prices at or above which they will sell, only in cash amounts. A portion of the schedule of reservation prices that we shall use in shown in table 65 and figure 6. Since the costs at which new houses can be built are influenced by market developments, the prices at which new houses will be made available will be specified as the examples are unfolded.

TABLE 65.—*Supply schedule—Number of owners of existing houses prepared to accept stated prices for their houses*

At a price not lower than—	The number of sellers is—
$1,667	2
2,000	3
2,100	4
2,200	6
2,300	9
2,400	12
2,500	16
2,600	21
2,700	27
2,800	35

FIGURE 6.



Source: Table 65.

If the prices offered by bidders are to be compared with those asked by owners, they must be in the same units. We can translate the monthly payments credit bidders are prepared to pay into the amount of mortgage these payments imply on the mortgage terms prevailing. We shall then assume that the bidders are prepared to make only the smallest downpayment allowed by the rules.

In the situation described in assumption 7—interest at 6 percent and maturity of 15 years—a monthly payment of $8.44 is required to support $1,000 of mortgage, and the minimum downpayment permitted is two-fifths of the purchase price, or two-thirds as large as the mortgage. We therefore translate the maximum bids of the credit bidders in table 64 into cash price equivalents, as shown in table 66.

TABLE 66.—*Implied cash prices offered by credit bidders at stated monthly payments if monthly payment per $1,000 of mortgage is $8.44 and required downpayment is 40 percent of price*

A monthly payment of—	Will support a mortgage of—	And require a downpayment of—	Making a total implied price offered of—	Number of credit bidders—
$8.50	$1,007	$672	$1,679	1
$8.40	995	664	1,659	2
$8.35	989	660	1,649	3
$8.30	983	656	1,639	4
$8.25	977	652	1,629	5
$8.20	972	648	1,620	6
$8.15	966	644	1,610	7
$8.10	960	640	1,600	8
$8.05	954	636	1,590	9
$8.00	948	632	1,580	10

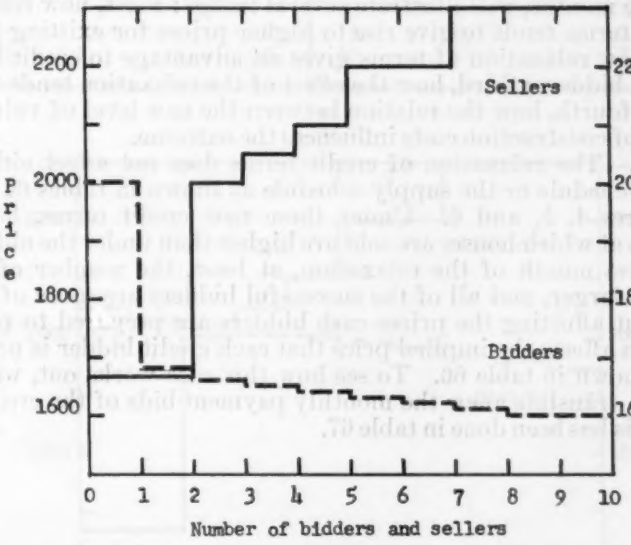
Case 1.—To the general assumptions we have already set forth we shall add that the cost of building a new house is $2,050. We want to find out what existing houses are sold, whether a new house is built, and which bidders get the houses that change hands.

For this purpose we may put the supply schedule and the demand schedule together, as shown in the table and chart for case 1.

Case 1

Supply				Demand			
At price not lower than	The number of houses offered is:			The number of bidders is:			At price not higher than
	Existing	New	Total	Total	Credit	Cash	
				1	-	1	$2,000
$1,667	2	-	2	2	1	1	1,679
2,000	3	-	3	3	2	1	1,659
2,050	3	1	4	4	3	1	1,649
2,100	4	1	5	5	4	1	1,639
				6	5	1	1,629
2,200	6	1	7	7	6	1	1,620
				8	7	1	1,610
2,300	9	1	10	10	8	2	1,600

Case 1



The cash bidder, with a bid of $2,000, is the highest bidder, and his bid is above the lowest reservation price in the market. The highest credit bidder, prepared to pay an implied price of $1,679, is also bidding more than the lowest reservation price.

The third bidder (the second credit bidder) is prepared to pay an implied price no higher than $1,659; in other words, 3 houses will be bought if the price is no higher than $1,659. Three houses will be sold, however, only if the price is not lower than $2,000.

Two houses are, therefore, sold at a price no lower than $1,667 (the lowest price asked for 2 houses) and no higher than $1,679 (the highest price offered for 2 houses). A new house is not built, and the existing house held for $2,000 is not sold, even though the cash bidder is prepared to pay as much as the asking price, because other existing houses are available for less. And the 2 houses that are sold are sold to the 2 bidders prepared to pay the highest prices, either in cash or implied by the mortgage and downpayment that the monthly payment will support. Note that this result is consistent with assumption 6, that 2 houses are bought each month, one for cash and the other with credit.

Now, let us assume that the permissible ratio of loan to value remains unchanged, but credit terms have been relaxed so that, instead of a mortgage of $1,000 requiring a monthly payment of $8.44, it requires a monthly payment of only $6.91. As will be developed in a later section, this relaxation may result either from reducing the interest rate from 6 to 3 percent, the maturity remaining at 15 years, or from lengthening the maturity from 15 to 21½ years, the interest rate remaining at 6 percent. Or it may result from an intermediate combination of reduced interest rate and lengthened maturity. For the moment, we are not concerned about which changes have produced the reduction in monthly payment per $1,000 of mortgage.

The two cases that we shall examine here, as they work out in successive months, will illustrate several things: First, how relaxation of credit terms tends to give rise to higher prices for existing houses; second, how relaxation of terms gives an advantage to credit bidders over cash bidders; third, how the effect of the relaxation tends to wear off; and, fourth, how the relation between the new level of values and the level of construction costs influences the outcome.

Case 2.—The relaxation of credit terms does not affect either the demand schedule or the supply schedule as shown in tables 64 and 65 and figures 4, 5, and 6. Under these new credit terms, however, the prices at which houses are sold are higher than under the old terms. In the first month of the relaxation, at least, the number of transactions is larger, and all of the successful bidders are users of credit.

Without affecting the prices cash bidders are prepared to pay, the relaxation affects the implied price that each credit bidder is prepared to pay, shown in table 66. To see how this case works out, we must, therefore, translate anew the monthly payment bids of the credit bidders. This has been done in table 67.

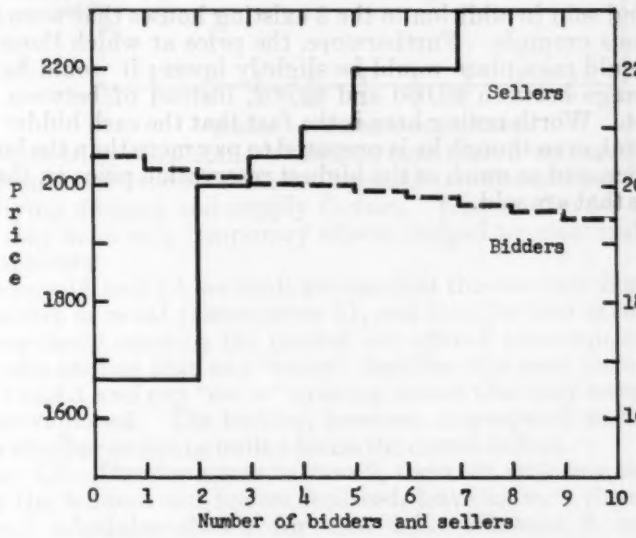
TABLE 67.—*Implied cash prices offered by credit bidders at stated monthly payments if monthly payment per $1,000 of mortgage is $6.91 and required downpayment is 40 percent of price*

A monthly payment of—	Will support a mortgage of—	And require a downpayment of—	Making a total implied price offered of—	Number of credit bidders—
$8.50	$1,230	$820	$2,050	1
$8.40	1,216	811	2,027	2
$8.35	1,208	806	2,014	3
$8.30	1,201	801	2,002	4
$8.25	1,194	796	1,990	5
$8.20	1,187	792	1,979	6
$8.15	1,179	786	1,965	7
$8.10	1,172	782	1,954	8
$8.05	1,165	777	1,942	9
$8.00	1,158	772	1,930	10

Case 2

Supply				Demand			
At price not lower than	The number of houses offered is:			The number of bidders is:			At price not higher than
	Existing	New	Total	Total	Credit	Cash	
				1	1	-	$2,050
$1,667	2	-	2	2	2	-	2,027
2,000	3	-	3	3	3	-	2,014
2,050	3	1	4	4	4	-	2,002
2,100	4	1	5	5	4	1	2,000
				6	5	1	1,990
2,200	6	1	7	7	6	1	1,979
				8	7	1	1,965
				9	8	1	1,954
2,300	9	1	10	10	9	1	1,942

Case 2



The supply schedule (unchanged from case 1) and the new demand schedule using the implied cash prices offered by the credit bidders, is shown in the table and chart for case 2.

The highest credit bidder is now bidding an implied price of $2,050, and the next 3 credit bidders are also bidding more than the $2,000 offered by the cash bidder. The 2 highest of these 3 credit bidders are clearly bidding enough to take the 2 existing houses offered at $1,667 or more, and the third is bidding enough to satisfy the existing houseowner whose reservation price is $2,000. The fourth credit bidder and the cash bidder, however, cannot meet the demand of the builder or of the owner of the house priced at $2,100. Three houses are therefore sold, all of them to credit bidders and all of them at a price between $2,002 and $2,014.

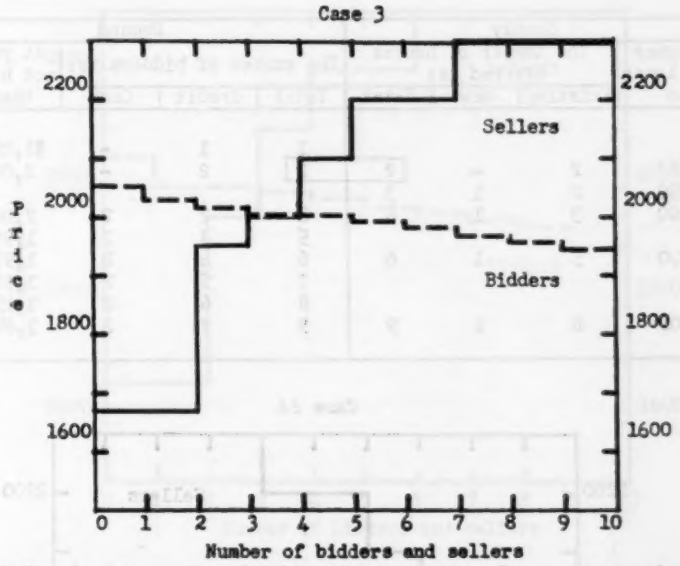
Several things may be noted about this outcome. First, the cash bidder, who would have been one of the successful bidders under the old terms, is unsuccessful under the new, even though he was prepared to pay 20 percent more than the price in case 1, and even though he is prepared to pay the minimum asking prices of the owners of all three of the existing houses that are sold. Second, the highest credit bidder, who would also have been successful under the earlier terms, got a house under the new terms for somewhat less per month than he would have paid under the old terms—between $8.30 and $8.35 instead of $8.44—but he had to make a downpayment some 20 percent larger (tables 66 and 67). Third, a new house was not built even though the highest credit bidder was prepared to pay as much as the cost of building.

This last fact may suggest that terms were not sufficiently relaxed to raise the value of the standing stock above the cost of construction, and so should be relaxed further in order to make new houses attractive in the market. Case 3, however, will suggest that the level of construction costs might also play a part.

Case 3.—If the cost of building were $1,950 instead of $2,050, all other conditions remaining the same as in case 2, a new house would be built and sold in addition to the 3 existing houses that were sold in the previous example. Furthermore, the price at which these transactions would take place would be slightly lower; it would be in the narrow range between $2,000 and $2,002, instead of between $2,002 and $2,014. Worth noting here is the fact that the cash bidder is still unsuccessful, even though he is prepared to pay more than the builder's asking price, and as much as the highest reservation price on the existing houses that are sold.

Case 3

Supply				Demand			
At price not lower than	The number of houses offered is:			The number of bidders is:			At price not higher than
	Existing	New	Total	Total	Credit	Cash	
				1	1	-	$2,050
$1,667	2	-	2	2	2	-	2,027
1,950	2	1	3	3	3	-	2,014
2,000	3	1	4	4	4	-	2,002
2,100	4	1	5	5	4	1	2,000
				6	5	1	1,990
2,200	6	1	7	7	6	1	1,979
				8	7	1	1,965
				9	8	1	1,954
2,300	9	1	10	10	9	1	1,942



By following cases 2 and 3 into the next month we can see how the effectiveness of credit relaxation depends on the composition of the underlying demand and supply factors. We can also see why relaxation may have only temporary effects, judged by measurable market developments.

In cases 2A and 3A we shall assume that the two new families enter the market as usual (assumption 5), and that the two existing houses that regularly come on the market are offered (assumption 6). We shall also assume that any "extra" families who may have bought in cases 2 and 3, and any "extra" existing houses that may have been sold, are not replaced. The builder, however, is prepared to build a new house whether or not he built a house the month before.

Case 2A.—Developments in case 2, together with our assumptions about the bidders and houses replaced, leave us with the supply and demand schedules shown for case 2A. Whereas 3 houses were

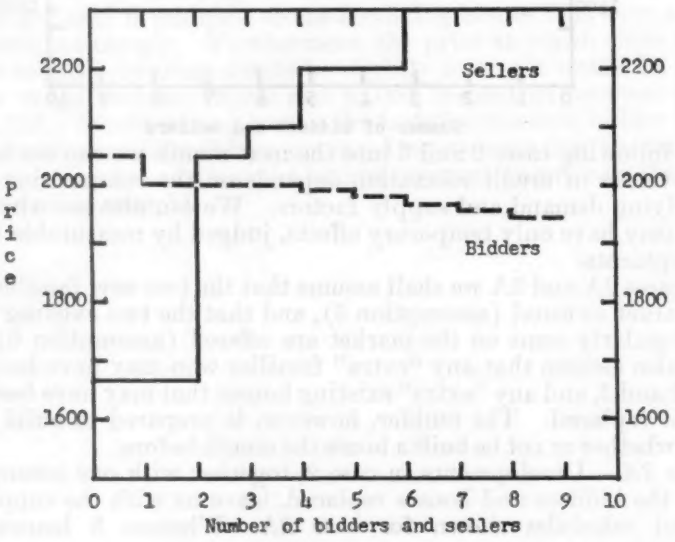
sold in case 2, only the 2 houses regularly sold under the original credit terms (case 1) will be sold in case 2–A. The price, however, will be higher than under the original terms, but perhaps a little lower than in case 2. It will be no higher than $2,002—the highest price at which 2 houses will be bought—and no lower than $2,000, for at this price 4 bidders would be seeking to purchase, although for even 3 to be successful the price would have to be at least $2,050. Both of the successful bidders buy on credit, and we now have 2 unsuccessful cash bidders prepared to pay $2,000.

Case 3A.—Similarly, case 3 would be succeeded by the conditions shown for case 3–A. Here too, fewer transactions will occur than in the predecessor case (case 3), and the price arrived at will be lower—between $1,990, at which price 4 bidders would be trying to buy, and $2,000, the highest price at which there are 3 bidders. In this case the two cash bidders are successful.

Case 2A

Supply				Demand			
At price not lower than	The number of houses offered is:			The number of bidders is:			At price not higher than
	Existing	New	Total	Total	Credit	Cash	
				1	1	-	$2,050
$1,667	2	-	2	2	2	-	2,002
2,050	2	1	3				
2,100	3	1	4	4	2	2	2,000
				5	3	2	1,990
2,200	5	1	6	6	4	2	1,979
				7	5	2	1,965
				8	6	2	1,954
2,300	8	1	9	9	7	2	1,942

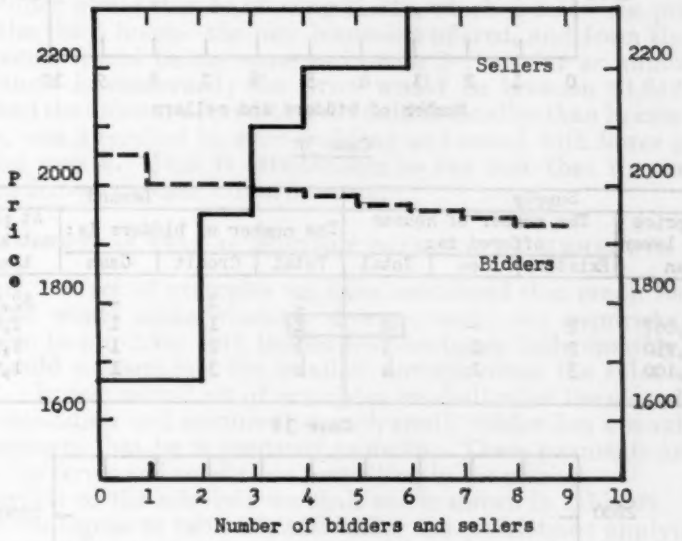
Case 2A



Case 3A

Supply				Demand			
At price not lower than	The number of houses offered is:			The number of bidders is:			At price not higher than
	Existing	New	Total	Total	Credit	Cash	
				1	1	-	$2,050
$1,667	2	-	2				
1,950	2	1	3	3	1	2	2,000
2,100	3	1	4	4	2	2	1,990
				5	3	2	1,979
2,200	5	1	6	6	4	2	1,965
				7	5	2	1,954
				8	6	2	1,942
2,300	8	1	9	9	7	2	1,930

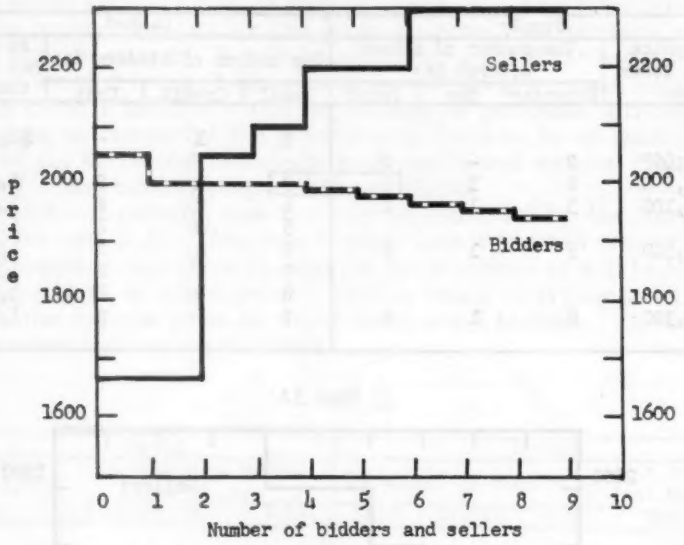
Case 3A



Case 2B

Supply				Demand			
At price not lower than	The number of houses offered is:			The number of bidders is:			At price not higher than
	Existing	New	Total	Total	Credit	Cash	
				1	1	-	$2,050
$1,667	2	-	2				
2,050	2	1	3				
2,100	3	1	4	4	1	3	2,000
				5	2	3	1,990
2,200	5	1	6	6	3	3	1,979
				7	4	3	1,965
				8	5	3	1,954
2,300	8	1	9	9	6	3	1,942

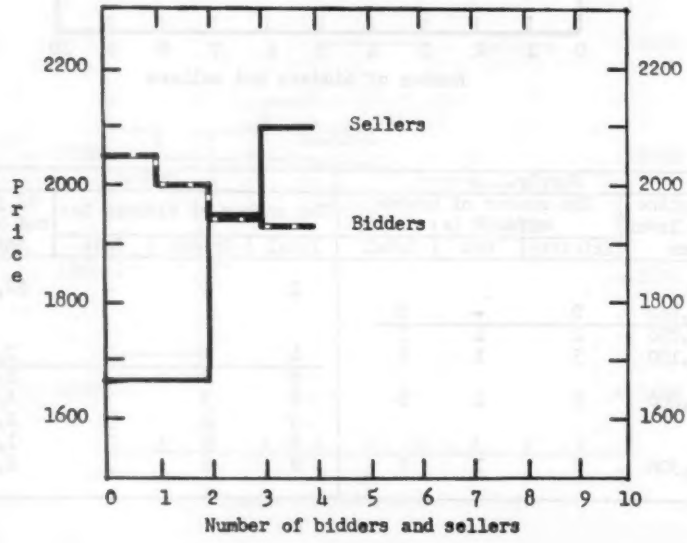
Case 2B



Case 3F

Supply				Demand			
At price not lower than	The number of houses offered is:			The number of bidders is:			At price not higher than
	Existing	New	Total	Total	Credit	Cash	
				1	1	-	$2,050
$1,667	2	-	2	2	1	1	2,000
1,950	2	1	3	3	2	1	1,942
2,100	3	1	4	4	3	1	1,930

Case 3F



In case 2–B, which represents the supply and demand situation that would follow case 2–A, a rather unstable equilibrium condition has developed. The 2 houses regularly offered for not less than $1,667 are sold for $2,000, 1 to the highest credit bidder, the other to 1 of the 3 cash bidders who have been unsuccessful so far. This condition is unstable, because the decision about which of the 3 cash bidders gets the second house must be made by some system of allocation other than market processes. If such a "tie-breaking" system is available, case 2B could continue to prevail so long as the demand and supply conditions we have assumed continues to persist.

This situation, apart from the element of instability, is similar to that in case 1. Prices, and the amount of credit that will be used, are higher.

Case 3–A is not followed immediately by an equilibrium situation, but if we were to continue in this same fashion, we would find that after 4 months, the "extra" credit bidders offering implied prices of $1,990, $1,979, $1,965, and $1,954 would have been satisfied. The third bidder would then be offering $1,942, which is below the price at which the third house—the new house—is offered, and from then on the outcome would be the same as in case 2–B as far as number of transactions is concerned; the price would be between $1,942 and $1,950 and the amount of credit used would be smaller than in case 2–B.

Thus, case 3 resulted in more building and ended with lower prices than did case 2. This is attributable to the fact that the cost of building is lower in case 3 than in case 2.

DOWNPAYMENTS AS WELL AS MONTHLY PAYMENTS AN ELEMENT IN PRICE

In our first set of examples we have considered that credit bidders could and would make whatever downpayment was required to enable them to purchase with the largest mortgage their monthly payment would support and the smallest downpayment the rules would permit. In our second set of examples we shall relax the second part of this condition and assume that each credit bidder has a maximum downpayment that he is prepared to make. These payments are not affected by terms and conditions prevailing in the market.

A portion of the schedule we shall use is shown in table 68. This table is analogous to table 64, and under the restrictions applying to our first set of examples, is consistent with it. Note that cash bidders constitute special cases of bidders who are prepared to make no monthly payments, and downpayments equal to the prices they are prepared to pay.

TABLE 68.—*Demand schedule—Number of bidders prepared to make monthly payments of stated amounts and downpayments of stated amounts*

At a monthly payment not higher than—	And a downpayment not higher than—																	
	$2,000	$1,600	$1,500	$1,400	$1,300	$1,200	$1,100	$1,000	$900	$800	$700	$600	$500	$400	$300	$200	$100	$0
	The number of bidders is—																	
$8.50									1	2	3	4	5	6	7	8	9	10
$8.40									2	3	4	5	6	7	8	9	10	11
$8.35									3	4	5	6	7	8	9	10	11	12
$8.30									4	5	6	7	8	9	10	11	12	13
$8.25									4	5	6	7	8	9	10	11	12	13
$8.20									4	6	7	8	9	10	11	12	13	14
$8.15									4	7	8	9	10	11	12	13	14	15
$8.10									4	8	9	10	11	12	13	14	15	16
$8.05									4	9	10	11	13	15	17	19	21	23
$8.00									4	10	12	14	16	18	20	22	24	26
$0.00	1	2	3	5	8	12	16	20	25	35	50	70	100	150	230	330	500	2,275

Again we must convert the credit bids into equivalent cash prices. This has been done in table 69 by the same procedure as in tables 66 and 67. Table 69 has been shortened, however, to show only the portion of table 68 relevant for credit bidders.

TABLE 69.—*Implied cash prices offered by credit bidders at monthly payments of stated amounts and downpayments of stated amounts, if monthly payment per $1,000 of mortgage is $8.44*

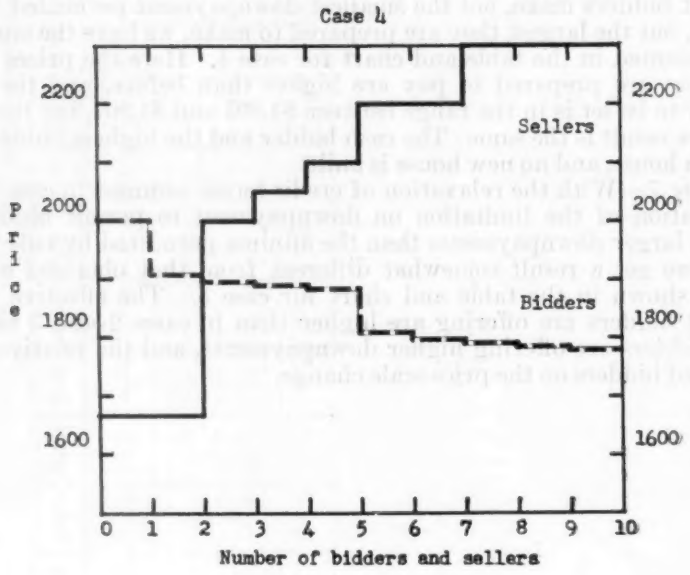
At a monthly payment of—	And a downpayment of—								
	$900	$800	$700	$600	$500	$400	$300	$200	$100
	The price offered is—								
$8.50	$1,907	$1,807	$1,707	$1,607	$1,507	$1,407	$1,307	$1,207	$1,107
$8.40	1,895	1,795	1,695	1,595	1,495	1,395	1,295	1,195	1,095
$8.35	1,889	1,789	1,689	1,589	1,489	1,389	1,289	1,189	1,089
$8.30	1,883	1,783	1,683	1,583	1,483	1,383	1,283	1,183	1,083
$8.25	-------	1,777	1,677	1,577	1,477	1,377	1,277	1,177	1,077
$8.20	-------	1,771	1,671	1,571	1,471	1,371	1,271	1,171	1,071
$8.15	-------	1,765	1,665	1,565	1,465	1,365	1,265	1,165	1,065
$8.10	-------	1,759	1,659	1,559	1,459	1,359	1,259	1,159	1,059
$8.05	-------	1,753	1,653	1,553	1,453	1,353	1,253	1,153	1,053
$8.00	-------	1 747	1,647	1,547	1,447	1,347	1,247	1,147	1,047

Case 4.—If we now reexamine case 1, on the assumption that the credit bidders make, not the smallest downpayment permitted by the rules, but the largest they are prepared to make, we have the situation represented in the table and chart for case 4. Here the prices credit bidders are prepared to pay are higher than before, and the price likely to be set is in the range between $1,895 and $1,907, but the qualitative result is the same: The cash bidder and the highest bidder each gets a house, and no new house is built.

Case 5.—With the relaxation of credit terms assumed in case 2, and relaxation of the limitation on downpayment to permit bidders to make larger downpayments than the minima permitted by rule (table 70), we get a result somewhat different from that obtained earlier, as is shown in the table and chart for case 5. The effective prices credit bidders are offering are higher than in cases 2 and 3 because the bidders are offering higher downpayments, and the relative positions of bidders on the price scale change.

Case 4

Supply				Demand			
At price not lower than	The number of houses offered is:			The number of bidders is:			At price not higher than
	Existing	New	Total	Total	Credit	Cash	
				1	-	1	$2,000
$1,667	2	-	2	2	1	1	1,907
2,000	3	-	3	3	2	1	1,895
2,050	3	1	4	4	3	1	1,889
2,100	4	1	5	5	4	1	1,883
				6	5	1	1,807
2,200	6	1	7	7	6	1	1,795
				8	7	1	1,789
				9	8	1	1,783
2,300	9	1	10	10	9	1	1,777



Case 5

Supply				Demand			
At price not lower than	The number of houses offered is:			The number of bidders is:			At price not higher than
	Existing	New	Total	Total	Credit	Cash	
				1	1	-	$2,130
$1,667	2	-	2	2	2	-	2,115
2,000	3	-	3	3	3	-	2,108
2,050	3	1	4	4	4	-	2,101
2,100	4	1	5	5	5	-	2,030
				6	6	-	2,015
2,200	6	1	7	7	7	-	2,008
				8	8	-	2,001
				9	8	1	2,000
2,300	9	1	10	10	9	1	1,986

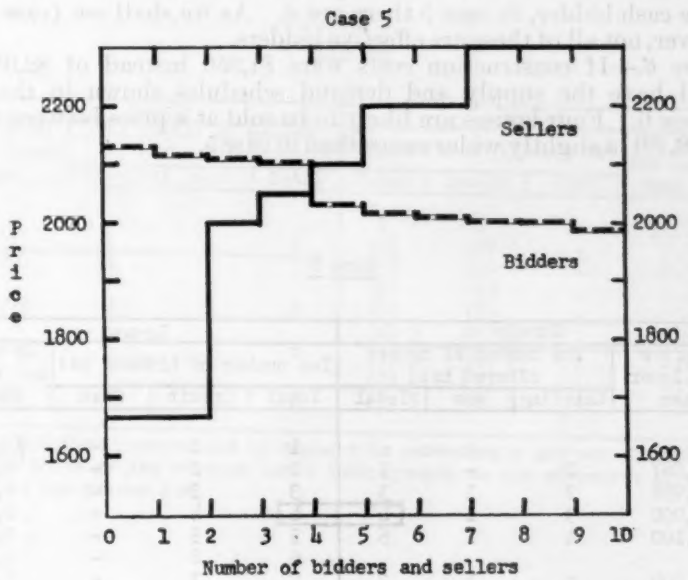


TABLE 70.—*Implied cash prices offered by credit bidders at monthly payments of stated amounts and downpayments of stated amounts, if monthly payment per $1,000 of mortgage is $6.91*

At a monthly payment of—	And a down payment of—								
	$900	$800	$700	$600	$500	$400	$300	$200	$100
	The price offered is—								
$8.50	$2,130	$2,030	$1,930	$1,830	$1,730	$1,630	$1,530	$1,430	$1,330
$8.40	2,115	2,015	1,915	1,815	1,715	1,615	1,515	1,415	1,315
$8.35	2,108	2,008	1,908	1,808	1,708	1,608	1,508	1,408	1,308
$8.30	2,101	2,001	1,901	1,801	1,701	1,601	1,501	1,401	1,301
$8.25	.....	1,993	1,893	1,793	1,693	1,593	1,493	1,393	1,293
$8.20	.....	1,986	1,886	1,786	1,686	1,586	1,486	1,386	1,286
$8.15	.....	1,979	1,879	1,779	1,679	1,579	1,479	1,379	1,279
$8.10	.....	1,972	1,872	1,772	1,672	1,572	1,472	1,372	1,272
$8.05	.....	1,964	1,864	1,764	1,664	1,564	1,464	1,364	1,264
$8.00	.....	1,957	1,857	1,757	1,657	1,557	1,457	1,357	1,257
$7.95	.....	1,950	1,850	1,750	1,650	1,550	1,450	1,350	1,250
$7.90	.....	1,942	1,842	1,742	1,642	1,542	1,442	1,342	1,242

Instead of three existing and no new houses being sold at a price between $2,002 and $2,014, as in case 2, we have 4 houses sold in all, 3 existing and 1 new. The price is set between $2,050, the lowest price at which 4 houses are offered for sale, and $2,101, the highest price at which 4 houses will be purchased. Parenthetically we may note that whereas in case 2 there was only 1 unsuccessful credit bidder ahead of the cash bidder, in case 5 there are 4. As we shall see (case 5–A), however, not all of these are effective bidders.

Case 6.—If construction costs were $1,950 instead of $2,050, we would have the supply and demand schedules shown in the table for case 6. Four houses are likely to be sold at a price between $2,030 and $2,101, a slightly wider range than in case 5.

Case 6

Supply				Demand			
At price not lower than	The number of houses offered is:			The number of bidders is:			At price not higher than
	Existing	New	Total	Total	Credit	Cash	
				1	1	-	$2,130
$1,667	2	-	2	2	2	-	2,115
1,950	2	1	3	3	3	-	2,108
2,000	3	1	4	4	4	-	2,101
2,100	4	1	5	5	5	-	2,030
				6	6	-	2,015
2,200	6	1	7	7	7	-	2,008
				8	8	-	2,001
				9	8	1	2,000
2,300	9	1	10	10	9	1	1,986

Case 5–A.—If we reexamine case 2–A in the same fashion, we have the situation shown in the table and chart for case 5–A. The outcome appears to be the same as in case 2–A, except the upper limit of the price is higher.

But this is not consistent with our assumption about the terms on which mortgage credit is available. To bid a price of $2,030, a bidder must be prepared to make a downpayment of $812. Table 70, however, indicates that the bidder of $2,030 is prepared to make a downpayment no larger than $800. The next three bidders shown for case 5–A are also deficient in downpayment, so it is not until we come to our cash bidder that we find one able to meet the credit terms we have assumed to be in force. The price arrived at will therefore be between $1,986 and $2,000, and the cash bidder is successful. This is a stable situation in that the outcome will be the same in succeeding months.

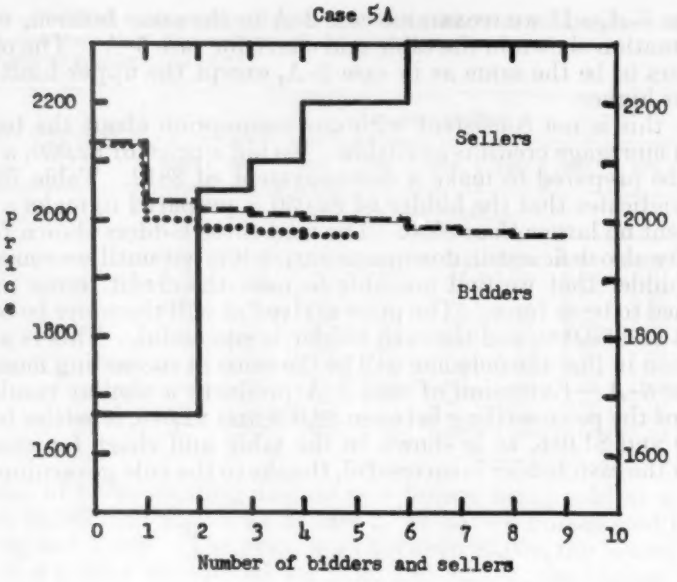
Case 6–A.—Extension of case 3–A produces a similar result. Instead of the price settling between $2,008 and $2,015, it settles between $1,979 and $1,986, as is shown in the table and chart for case 6–A. Again the cash bidder is successful, thanks to the rule governing credit

Case 5A

Supply				Demand			
At price not lower than	The number of houses offered is:			The number of bidders is:			At price not higher than
	Existing	New	Total	Total	Credit	Cash	
				1	1	-	$2,130
$1,667	2	-	2	(2)	(2)	-	2,030
2,050	2	1	3	(3)	(3)	-	2,015
				(4)	(4)	-	2,008
2,100	3	1	4	(5)	(5)	-	2,001
				(6) 2	(5) 1	1	2,000
2,200	5	1	6	(7) 3	(6) 2	1	1,986
				(8) 4	(7) 3	1	1,979
2,300	8	1	9	(9) 5	(8) 4	1	1,972

Note: Bidders represented by numbers in parenthesis are not eligible to bid at these prices because their downpayments do not represent 40 per cent of the prices bid.

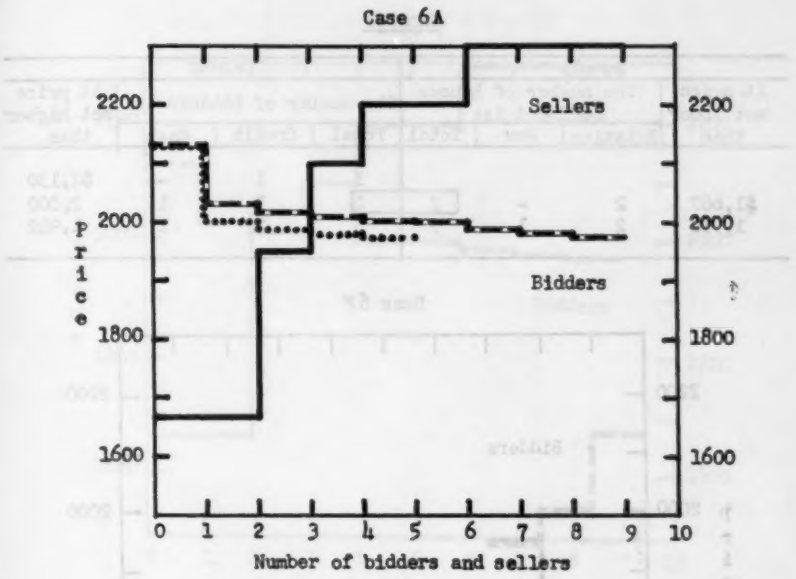
Case 5A



Case 6A

Supply				Demand			
At price not lower than	The number of houses offered is:			The number of bidders is:			At price not higher than
	Existing	New	Total	Total	Credit	Cash	
				1	1	-	$2,130
$1,667	2	-	2	(2)	(2)	-	2,030
1,950	2	1	3	(3)	(3)	-	2,015
2,100	3	1	4	(4)	(4)	-	2,008
				(5)	(5)	-	2,001
2,200	5	1	6	(6) 2	(5) 1	1	2,000
				(7) 3	(6) 2	1	1,986
				(8) 4	(7) 3	1	1,979
2,300	8	1	9	(9) 5	(8) 4	1	1,972

Note: Bidders represented by numbers in parenthesis are not eligible to bid at these prices because their downpayments do not represent 40 per cent of the prices bid.



terms. This is not a stable situation, but after another 5 months stability would be reached and the price would settle between $1,942 and $1,950, as may be seen in the table and chart for case 6–F.

RELAXATION OF DOWNPAYMENTS

The first effect of a relaxation of credit terms by way of lowering monthly payment per $1,000 of mortgage is thus likely to be an increase in the prices at which transactions take place. As extra families are satisfied at these prices, as we have seen, prices are likely to fall, reflecting the fact that the remaining bidders cannot or will not make the downpayments required. Further relaxation of monthly payment terms may make some families eligible again, but at some point the solution is likely to be sought in relaxation of downpayment requirements.

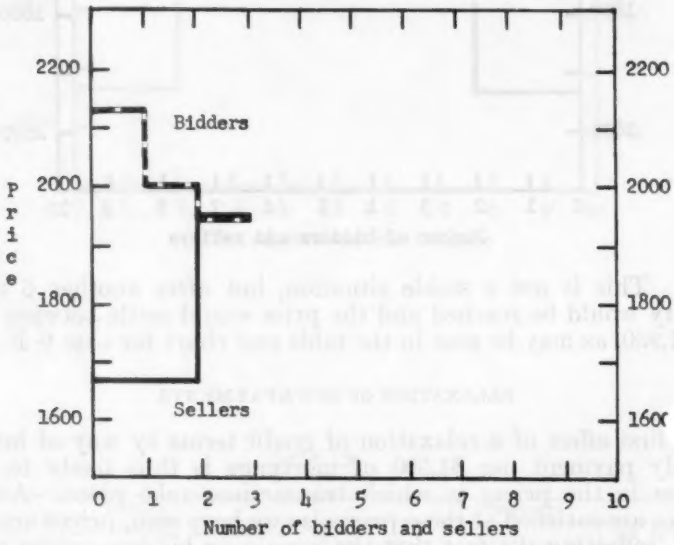
Let us assume that the required downpayment is now reduced to 10 percent of the price. We need not go through a further set of examples in detail, but we may suggest how this relaxation would influence developments.

The reader may like to proceed through cases 7 and 8—on the assumption that the required downpayment is 10 percent—as we have already gone through cases 2, 3, 5, and 6. He will find that the outcome of case 7 is the same as case 2–B, with the price at $2,000, and a number of unsatisfied cash bidders using some nonmarket technique for allocation. He will also find that case 8 develops into case 6–F, with the price between $1,942 and $1,950.

Case 6F

Supply				Demand			
At price not lower than	The number of houses offered is:			The number of bidders is:			At price not higher than
	Existing	New	Total	Total	Credit	Cash	
				1	1	-	$2,130
$1,667	2	-	2	2	1	1	2,000
1,950	2	1	3	3	2	1	1,942

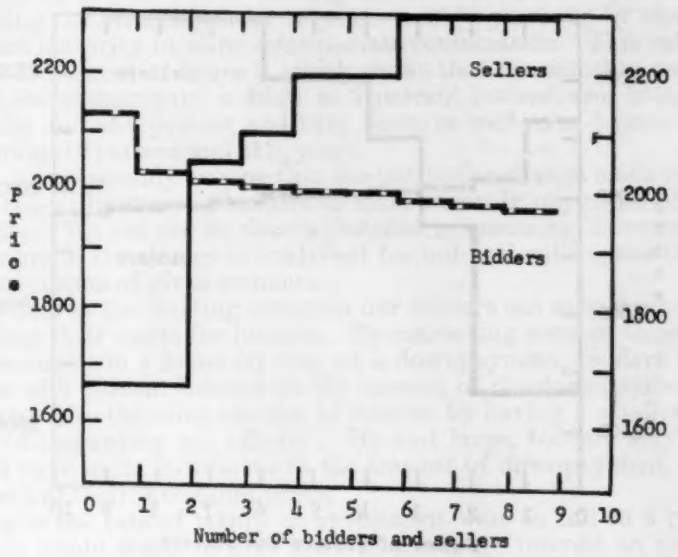
Case 6F



Case 7

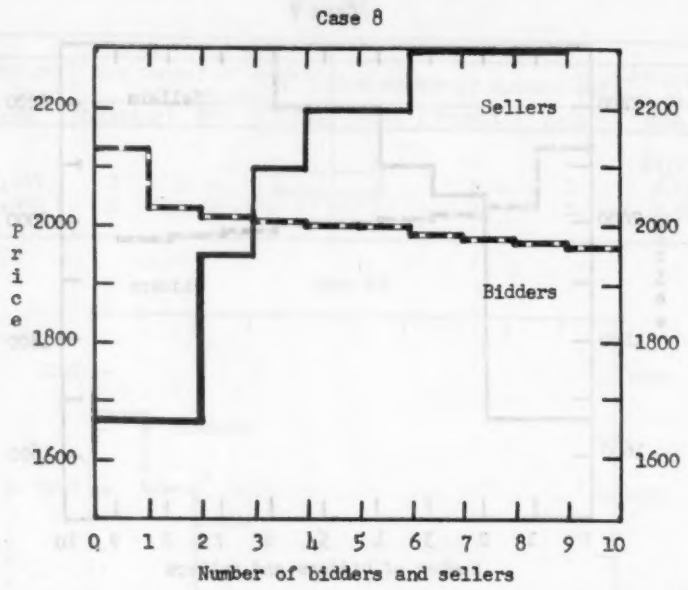
Supply				Demand			
At price not lower than	The number of houses offered is:			The number of bidders is:			At price not higher than
	Existing	New	Total	Total	Credit	Cash	
				1	1	-	$2,130
$1,667	2	-	2	2	2	-	2,030
2,050	2	1	3	3	3	-	2,015
2,100	3	1	4	4	4	-	2,008
				5	5	-	2,001
2,200	5	1	6	6	5	1	2,000
				7	6	1	1,986
				8	7	1	1,979
2,300	8	1	9	9	8	1	1,972

Case 7



Case 8

Supply				Demand			
At price not lower than	The number of houses offered is:			The number of bidders is:			At price not higher than
	Existing	New	Total	Total	Credit	Cash	
				1	1	-	$2,130
$1,667	2	-	2	2	2	-	2,030
1,950	2	1	3	3	3	-	2,015
2,100	3	1	4	4	4	-	2,008
				5	5	-	2,001
2,200	5	1	6	6	5	1	2,000
				7	6	1	1,986
				8	7	1	1,979
2,300	8	1	9	9	8	1	1,972
				10	9	1	1,964
				11	10	1	1,957
2,400	11	1	12	12	11	1	1,950
				13	12	1	1,942



If we were to assume that cases 7 and 8 followed immediately after cases 5–A and 6–F in time, we should find that the reduction of the required downpayment would result in a rise in price. If cases 7 and 8 followed cases 5 and 6, the result would be a slower decline in price as more "extra" bidders had to be satisfied before the effect of the whole set of relaxations had worn off.

INTEREST RATES AND HOW PRICES ARE PAID

We have been assuming throughout that the bids people are prepared to make—treating monthly payments and downpayments separately—are fixed and independent of conditions and developments in the market. As was pointed out earlier, in any real situation people's preferences and willingness to pay prices are affected by a host of developments. The assumption we have made is a convenient one for studying how changes in particular conditions are likely to work out, and as a practical matter, any analysis would be most difficult without it.

One element affecting decisions should be singled out as pertinent in the present survey—not to say that it will affect everyone or that it will be decisive—but to recognize the kind of modification it is likely to work in the kinds of cases we have considered. This element is the level of interest rates—more particularly, the relation of the mortgage interest rate to the rate participants in the market can earn on their invested assets.

We referred earlier to the fact that the monthly payment per $1,000 of mortgage could be reduced from $8.44 to $6.91 either by reducing

the mortgage interest rate from 6 percent to 3 percent, leaving the maturity at 15 years, or by leaving the interest rate at 6 percent and extending the maturity from 15 years to 21½ years, or by changing rate and maturity in some intermediate combination. This relationship is illustrated in figure 7, which shows that the monthly payment per $1,000 of mortgage is $6.91 at 5 percent interest and 18½ years maturity and at 4 percent and 16½ years, as well as at 3 percent and 15 years and 6 percent and 21½ years.

We can reasonably assume that the particular change made will not affect the willingness of bidders to make monthly payments of given amounts. We are not so clearly justified in assuming, however, that the nature of the change is irrelevant for bidders' willingness to make downpayments of given amounts.

Say that in the starting situation our bidders can earn 6 percent by investing their assets for income. By converting some of these assets to investment in a house by way of a downpayment, bidders lose an income of 6 percent interest on the amount of the downpayment, but they also save the same amount of interest by having a smaller mortgage (disregarding tax effects). By and large, bidders may be assumed to be quite indifferent to the amount of downpayment, within the limit of their investable assets.

If now the rate of return on investment were to fall to 3 percent, bidders would stand to save more in mortgage interest on any particular amount of downpayment than they would lose in investment income. We might reasonably expect, as a result of such a change, that bidders would be prepared to make larger downpayments than before and, in the extreme, that more bidders would be prepared to pay all cash.

Similarly, if the return on investment were to remain at 6 percent while the mortgage rate dropped to 3 percent, we should expect bidders to be more reluctant to make downpayments of any appreciable amount. Perhaps also, the proportion of bidders prepared to pay all cash would decline appreciably.

We may also note a related effect on mortgage maturities. If the mortgage interest rate is below the rate of return bidders can earn on other investments, and if bidders have a choice of maturities, we should reasonably expect them to prefer long over short. The long maturity would extend the period during which the differential advantage of the higher investment income over the lower mortgage interest cost could be enjoyed. If, on the contrary, the mortgage rate is higher than the rate of income on alternative investments, we might ordinarily expect that bidders would prefer short over long maturities.

This is perhaps a round-about and formal way of expressing the common observation that when mortgage rates are "high" (relative to other rates of return) many people try to pay off their mortgages rapidly, or to stay out of debt, and when mortgage rates are "low," some borrow heavily and try to stay in debt.

INTEREST RATES AND OUTSTANDING DEBT

The credit terms by which the monthly payment per $1,000 of mortgage is reduced affect the amount of debt outstanding in still another way. In a market such as that assumed in our beginning example, in which mortgage lending goes on at a steady rate of $1,000 per month, all mortgages run for 15 years, and bear interest at 6 percent, the amount of debt outstanding will stabilize at the end of 15 years at $103,744. If, in order to reduce the monthly payment per $1,000 of mortgage from $8.44 to $6.91, the interest rate is cut to 3 percent, the stabilized volume of outstanding debt will be $97,161.

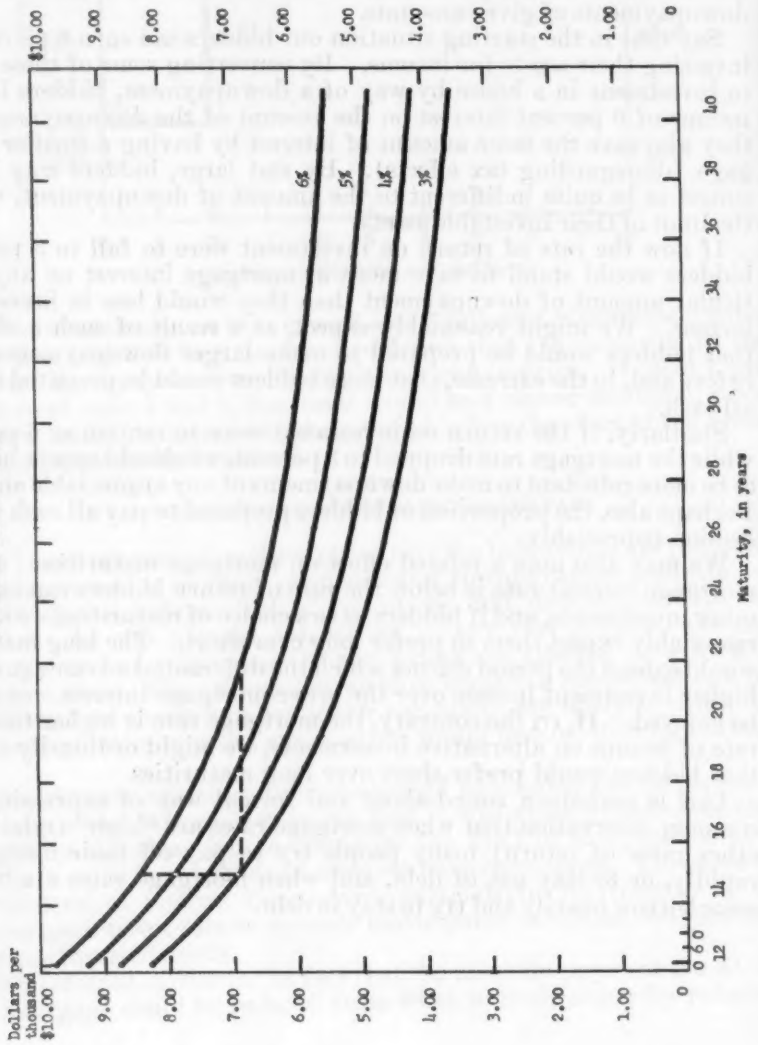


FIGURE 7.

Such a large change in interest rate is not ordinarily to be expected in any short period in the absence of very marked changes in economic conditions or the structure of the economy. The same result, as we have seen, can be obtained by a change in maturity from 15 years to 21½, without change in the interest rate. If we make this change, however, the stabilized volume of outstanding debt, at the end of 21½ years, becomes $156,303, half again as large as on the original terms.

We can now explore the effect on the stabilized volume of outstanding debt of the relaxation of credit terms considered in our earlier examples. We assumed that in the situation from which we started, there were 360 houses, half of them mortgaged and half debt free. Each mortgage was for 15 years at 6 percent interest, and 1 of the mortgages had been written each month for the past 15 years. At the start, then, the outstanding amount of debt was $103,744.

If we now assume that each of the stable cases we examined earlier were to prevail, in turn, for an indefinite period, the stabilized volume of outstanding debt would be as set out in table 71. Here it may be noted first, that the stabilized amount of debt outstanding tends to be larger under the relaxed terms than under the original terms of case 1; second, that the debt tends to be higher if the interest rate on investment is higher than the rate on the mortgage; and third, that in each pair of cases, the debt tends to be smaller in the case with the lower construction costs than in the case with the higher construction costs.

TABLE 71.—*Stabilized volume of outstanding debt* [1]

Case	Price		Credit terms available		Total stabilized volume of outstanding debt					
					Investment rate 6 percent			Investment rate 3 percent		
	Lowest	Highest	Mortgage	Downpayment as a percent of price	Mortgage terms: 15 years, 6 percent [2]	Mortgage terms: 15 years, 3 percent	Mortgage terms: 21½ years, 6 percent [2]	Mortgage terms: 15 years, 6 percent	Mortgage terms: 15 years, 3 percent [2]	Mortgage terms: 21½ years, 6 percent
1	$1,667	$2,000	15 years, 6 percent	40	$79,572 103,744			$79,572		
2B	2,000	2,000	15 years, 3 percent or 21½ years, 6 percent	40		$116,593	$171,933 187,564		$106,877 116,593	$171,933
3F	1,943	1,950	15 years, 3 percent or 21½ years, 6 percent	40		113,290	163,024 182,249		101,339 113,290	182,249
4	1,896	1,907	15 years, 6 percent	40 or more	103,329 118,061			103,329		
5A	1,987	2,000	15 years, 3 percent or 21½ years, 6 percent	40 or more		115,816	169,901 186,313		105,614 115,816	169,901
6F	1,943	1,950	15 years, 3 percent or 21½ years, 6 percent	40 or more		113,290	178,654 182,249		111,055 113,290	178,654
7	2,000	2,000	15 years, 3 percent or 21½ years, 6 percent	10 or more		174,890	171,933 281,345		106,877 174,890	171,933
8	1,943	1,950	15 years, 3 percent or 21½ years, 6 percent	10 or more		169,837	163,024 273,218		101,339 169,837	163,024

[1] Assuming the lowest possible price for each case.

[2] Possible range, based on minimum required downpayment and maximum downpayment the buyer is prepared to make.

E. Farm Housing

DEMAND AND NEED FACTORS—UNITED STATES FARM HOUSING, 1961–70

GLENN H. BEYER, Director, Housing Research Center, Cornell University, Ithaca, N. Y.

This memorandum is submitted in response to the following questions:

What is a reasonable estimate of net change in farm households which will occur in each of the years 1961–70?

What is a reasonable estimate of the number of farm families who will occupy substandard housing in 1960?

Assuming no change in existing facilities to relieve substandard housing conditions of farm families, how many such families will occupy substandard units in each of the years 1961–70?

NET CHANGE IN FARM HOUSEHOLDS, 1961 TO 1970

The trend of a decline in the farm population [1] of the Nation, both numerically and in relation to the population of the Nation as a whole, is generally well known. In 1910, rural areas, largely farms, comprised 54 percent of the population, whereas in 1950 they accounted for only 41 percent, of which only one-third lived on farms.[2]

Numerically, the farm population was made up of approximately 25,058,000 persons in 1950, representing 16.6 percent of the total population. In 1958, according to Census estimates, there were 4,251,000 fewer persons living on farms; the total then represented only 12.0 percent of the total population. (See table 72.)

More important than "population," to the subject of housing, is the trend in the number of "households." The Census counted a total of 6,275,000 rural farm households in 1950, and according to its Current Population Series, estimated only 5,218,000 in 1957. While the CPS is designed to measure level, and does not pretend to measure year-to-year changes with any reliability, it is interesting to note that the decline per year, based on the "level" estimates, varied from an average of 143,000 during the 1953 to 1955 period to 171,000 during the 1955 to 1957 period. (See table 73.)

[1] One of the difficulties in writing about farms and farm population is the lack of a generally agreed upon definition of who is a farmer. Since frequent use is made in this paper of United States census data, the definition used is that used by the Bureau of the Census. The 1950 farm residence classification was based upon the respondent's conception of whether or not he lived on a farm. The census farm housing data therefore include not only commercial farmers but also submarginal farmers, part-time farmers, and residential farmers.

[2] Glenn H. Beyer and J. Hugh Rose, Farm Housing, A Volume in the Census Monograph Series, New York: John Wiley & Sons, 1957, p. 1.

TABLE 72.—*Population of the United States, including Armed Forces overseas, and farm population: April 1950 to 1958*

Year	Total population including Armed Forces overseas	Farm population	
		Number of persons	Percent of total population
1958	173,435,000	20,827,000	12.0
1957	170,510,000	20,396,000	12.0
1956	167,498,000	22,257,000	13.3
1955	164,619,000	22,158,000	13.5
1954	161,761,000	21,890,000	13.5
1953	159,012,000	22,679,000	14.3
1952	156,421,000	24,283,000	15.5
1951	153,691,000	24,160,000	15.7
1950	151,132,000	25,058,000	16.6

Source: U. S. Bureau of the Census, Farm Population, Estimates of the Farm Population of the United States, April 1950–58, Series Census–AMS (p. 27), No. 25, Aug. 8, 1958.

TABLE 73.—*Farm households in the United States, 1950, 1953, 1955, and 1957*

March 1950	6,275,000
April 1953	5,831,000
Average annual decrease 1950–53	[1] 144,000
April 1955	5,545,000
Average annual decrease 1953–55	[1] 143,000
March 1957	5,218,000
Average annual decrease 1955–57	[1] 171,000
Average annual decrease 1950–57	[1] 151,000

[1] Because the CPS does not pretend to measure year-to-year changes, there may be an appreciable error in these figures.

Source: U. S. Bureau of the Census, Current Population Reports, Households and Families, by Type: 1950–57, series P–20, No. 76, July 5, 1957.

There are a number of well-established explanations for this decline in the farm population. Undoubtedly the chief factor has been mechanization. The main effect of mechanization, according to the United States Department of Agriculture,[3] has been the reduction in the number of acres formerly used to grow feed for horses and mules. (Less than 3.5 million horses and mules remained on farms in 1958. This represents a drastic decline from the more than 22 million in 1920. The difference has been accounted for by an increase in the number of tractors on farms, from only 246,000 in 1920, to over 4 million in 1958). Another effect has been the rise in labor productivity. Labor saving machines and equipment have helped to reduce costs. Harvesting equipment, for example, has undergone revolutionary changes. Whereas there were 11,592,000 persons (or 31 percent of the working force) employed in agricultural pursuits in 1910, this number had declined to 7,369,000 persons (or only 11.9 percent of the working force) in 1950.[4] The downward trend in labor required in farm work and the increased output per man-hour have been shown by many authorities.[5]

[3] U. S. Department of Agriculture, Land, The Yearbook of Agriculture, 1958, Land and Advances in Technology, Washington: Government Printing Office, 1958, pp. 480–492.

[4] J. Frederic Dewhurst and Associates, America's Needs and Resources—A New Survey (Agricultural Capacity), New York: The Twentieth Century Fund, 1955, p. 805, reporting census data.

[5] See especially U. S. Senate, Manpower, Chemistry, and Agriculture, staff report to the Subcommittee on Labor and Labor-Management Relations, Government Printing Office, 1952.

Accompanying the trend toward mechanization has been the factor of increased farm crop yields and greater livestock productivity. Not only have new equipment and techniques added to farm yields but chemical research has brought new types of fertilizers and new kinds of weed killers and insecticides. There have also been improved varieties of crops, and improvements in breeding, feeding, and managing livestock.

An important question is: At what level will the number of farmers become stabilized? To attempt to answer this question, it is important to examine the different types of farms in order to delineate the commercial farms, which have most generally experienced the advances in technology described above, from other types, including the many submarginal farms which actually contribute very little to gross farm output.

In 1950, the percent of farms by economic class was distributed as follows: [6]

TABLE 74.—*Number of farm families by economic class, 1950*

	Number	Percent
Commercial farms:		
Class I (value of farm products sold in 1949 $25,000 or more)	103,231	1.9
Class II (value of products, $10,000 to $24,999)	381,151	7.1
Class III (value of products, $5,000 to $9,999)	721,211	13.4
Class IV (value of products, $2,500 to $4,999)	882,302	16.4
Class V (value of products, $1,200 to $2,499)	901,316	16.8
Class VI (value of products, $250 to $1,199)	717,201	13.3
Other farms:		
Part time	639,230	11.9
Residential	1,029,392	19.1
Abnormal (institutional farms, etc.)	4,216	.1
Total	5,379,250	100.0

If the first four economic classes are combined, and if classes V and VI are combined with part-time and residential farms,[7] a usable separation of high production and low production farms is obtained. Such a separation would indicate that approximately 40 percent of the farms were in the first category (classes I through IV) and 60 percent in the other (classes V, VI) and ("other farms").

While the fact that a different farm definition is used for purposes of population and household estimates than for the purpose of an agricultural census creates problems of applying these percentages to 1958 census estimates, such combination of statistics would seem to be permissible here since they are used only with respect to broad figures.

It would seem, when trying to establish a level of farm households for any future date, that it would be desirable to observe the past trends

[6] 1950 Census of Agriculture, vol. II, General Report, Statistics by Subjects, ch. XII.

[7] Part-time farms include farms whose sales of farm products in 1949 were $250 to $1,999, if the farm operator reported (*a*) that he had worked 100 or more days off the farm in 1949, or (*b*) that the year's nonfarm income received by him and members of his family had been greater than income from the sale of farm products. Residential farms include all farms except abnormal farms, whose total sales of farm products in 1949 amounted to less than $250. Some of these represent farms on which the operator worked off the farm more than 100 days in 1949. Some represent farms on which the year's income from nonfarm sources had been greater than income from sales of agricultural products. Others represent subsistence and marginal farms of various kinds. Some farms included here might, under different conditions, have qualified as commercial farms.

in the number of farms based on their "major" and "scale" groups. These trends are shown in table 75.

Several significant factors can be seen in these data. First, the family-scale farm is one of the largest types, numerically speaking, and they show evidence of the greatest downward trend. This could be the result of several factors, such as their flexibility in becoming large-scale farms. (An example may be the sharecropper units in the South which have, in many instances, become joined to the home unit and then become operated with wage labor.) [8] Another possible result is the migration of the sharecropper family to urban employment.

TABLE 75.—*Trends in number of farms by major and scale groups, 1930 to 1950*

Year	All farms	All commercial farms	Large-scale farms	Family-scale farms	Small-scale farms	Part-time and residential farms
	Thousands					
1930	6,289	5,282	128	4,356	798	1,007
1940	6,097	4,717	119	3,718	880	1,380
1945	5,859	4,186	117	3,284	785	1,673
1950	5,379	3,706	103	2,886	717	1,673
	Index 1930=100					
1930	100	100	100	100	100	100
1940	97	89	93	85	110	137
1945	93	79	91	75	98	166
1950	86	70	80	66	89	166

NOTE.—Large-scale farms, class I; Large family-scale, class II; Upper-medium family-scale, class III; Lower-medium family-scale, class IV; Small family-scale, class V; Small-scale, Class VI.
Source: Ronald L. Mighell, American Agriculture: Its Structure and Place in the Economy, a volume in the Census Monograph Series, New York: John Wiley & Sons, 1955, p. 50.

Another extremely significant factor can be seen in the upward trend of part-time and residential farms. (Mighell's analysis indicates that this sharp upward trend may be a reflection, at least in part, of Census varying definitions of a farm over this 20-year period.)

Perhaps the most significant factor that can be observed from the data in table 75 (and especially from the indexes shown in the table) is the lack of any great "selectivity" as far as farm "dropout" is concerned. In other words, it is not merely the class V farm or the class VI farm that is changing, but it seems to be all types.

With no objective measures at hand, but recognizing that technological factors will continue to operate, on the one hand, and there will be a pressure for greater agricultural productivity, on the other, it would appear that an estimate of between 300,000 and 700,000 farms, to be lost by the end of the next decade, would be a conservative estimate. This would mean a total of between 4,500,000 and 4,900,000 farm households in 1970.

How does such an estimate fit into the past trend of the relationship between total population and farm population in the Nation? The Census has projected the total number of households, up to that date, on the basis of four series, each representing a different set of assump-

[8] Ronald L. Mighell, American Agriculture: Its Structure and Place in the Economy, A Volume in the Census Monograph Series, New York: John Wiley & Sons, 1955, p. 51.

tions as to birth rates, death rates, and migration. These assumptions, together with the projections (in number of households) for July 1970, are shown below.[9]

TABLE 76.—*Estimated number of households in United States, 1975*

	Assumptions	Total number households
Series I	The rates of change (in percent single, percent who are heads of households, etc.) for each 10-year period will be equal to the rates of change for the 8-year period, 1947 to 1955.	61,378,000
Series II	The average annual rates of change between 1950 and 1955 will continue to 1975.	60,762,000
Series III	Half the average rates of change between 1950 and 1955 will extend to 1975	58,988,000
Series IV	No change in the relevant measures (percent single, percent who are heads of households, etc.) will occur after 1955.	57,110,000

The 4,900,000 farm households would represent approximately 8 percent of the series I estimate of the census, and the 4,500,000 farm households would represent approximately the same percentage of the series IV estimate. This would seem to be a reasonable projection of a trend which in the past has been depicted by these percentage estimates: 1950—16.6 percent; 1953—14.3 percent; 1956—13.3 percent; and 1958—12.0 percent.[10]

A summary of these projects is shown in table 77.

TABLE 77.—*Farm households in the United States, 1950 and 1957, and projections to 1960 and 1970*

Year:	*Number of households*
1950 (actual)	6,275,000
1957 (estimated)	5,218,000

	High projection	Low projection
1960 1961 1962 1963 1964 1965 1966 1967 1968 1969	Net loss of only 24,500 households (average per year for 13 years), most of loss by 1960.	Net loss of only 55,200 households (average per year for 13 years), most of loss by 1960.
1970 (projected)	4,900,000	4,500,000.

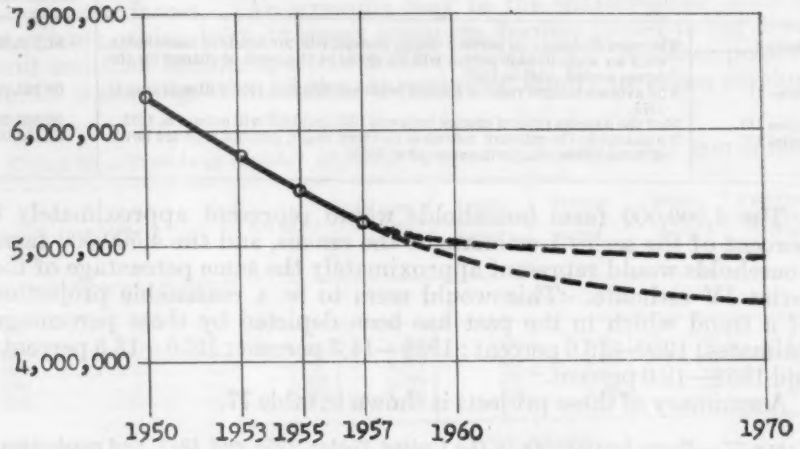
It can be seen from table 77 that, if the higher level of total household formation would be attained, there would be a net loss of only 24,500 (average) farm households per year over the 13-year period 1957 to 1970. If the lower level were attained, there would be a net loss of only 55,200 (average) per year for the same period. Even if there is an error as high as 50 percent in the average annual net loss of 151,000 farm households (mentioned earlier) during the period 1950 to 1957,

[9] Source: U. S. Bureau of the Census, Current Population Reports, Projections of the Number of Households and Families, 1960 to 1975, Series P–20, No. 69, August 31, 1956.

[10] This trend is not to be taken too seriously, however, since it is likely to reverse itself as the population of the Nation continues to grow, and the total number of farm families hits a "floor," or even moves slightly upward if some lands are brought back into cultivation (such as the lands in the Atlantic States that have reverted to grazing and forest uses). It would appear that, despite the current farm surpluses, by 1970 agriculture will be faced with a need for productivity surpassing any rate of production of the past.

these data indicate that the number of farmers may be reaching a point of stabilization soon. This would tend to indicate a rather sharp drop in the next few years to a range between 4,900,000 and 5,100,000 households in 1960, with a leveling off after 1962 or 1964 (fig. 8). (There

FIGURE 8. TREND IN NUMBER OF FARM HOUSEHOLDS



Source: 1950 to 1957: U.S. Bureau of the Census;
1957 to 1970: Author's Projections.

will, undoubtedly, be small losses and gains after that period, depending upon the year-to-year factors at work.) This situation, then, would tend to indicate that we are going to the kind of situation that existed from 1910 until 1947, when the drop in farm population was smaller, for the entire 37-year period, than it has been for the 10-year period since 1947.

While the above analysis may be crude, it does point out the principal factors at work that will determine the number of farm households between 1960 and 1970. The ultimate validity of the projections will rest, of course, upon the validity of the various assumptions that are stipulated. For example, the Census projections clearly imply a continuation of a period of high employment, and this has been the basis for the total number of household projections to 1970. It has been theorized that, in times of depression, families tend to leave the city for the land on farms. If any continuing or serious recession or depression should occur, a new appraisal undoubtedly would be required of the trends that have been projected.

NUMBER OF FARM FAMILIES OCCUPYING SUBSTANDARD HOUSING, 1960 TO 1970

In order to project a reasonable estimate of the number of farm families who will occupy substandard housing in 1960 and 1970, it is necessary to begin with the base of information from the 1950

United States census. Table 78 shows the condition and plumbing facilities of all dwelling units in that year.

TABLE 78.—*Condition and plumbing facilities, all dwelling units, 1950*

[Percent]

Condition and facilities	Total	Total nonfarm	Urban	Rural nonfarm	Rural farm
Not dilapidated	90.3	91.8	93.5	86.6	80.5
With private toilet and bath and hot running water	63.1	69.5	77.8	44.8	23.3
With private toilet and bath and only cold water	3.2	3.4	3.2	3.9	2.1
With running water, lacking private toilet and bath	12.3	11.4	10.5	16.0	15.0
No running water	11.5	7.0	2.0	21.9	40.1
Dilapidated	9.7	8.2	6.5	13.4	19.5
With private toilet and bath and hot running water	1.4	1.6	1.8	.9	.5
Lacking hot water, private toilet or bath	8.3	6.6	4.7	12.5	19.0
Total	100.0	100.0	100.0	100.0	100.0

Source: U. S. Bureau of the Census, 1950 Census of Housing, Vol. I: General Characteristics; Pt. I: United States Summary, pp. 1-4.

To understand these figures, it is helpful to observe the distribution of units by condition and availability of water and plumbing facilities for farms in the various economic classes. These data are shown in table 79.

TABLE 79.—*Condition and plumbing facilities, by economic class of farm, 1950*

[Percent]

Type of farm	Dilapidated	Hot and cold running water	Cold water only	Flush toilet	Installed bath or shower
Commercial farms:					
Classes I and II	3	70	10	65	70
Class III	5	48	14	44	47
Class IV	11	32	14	29	33
Class V	19	22	13	22	24
Class VI	30	10	8	11	14
Other farms:					
Part time	16	30	13	30	32
Residential	23	25	12	25	28

Source: Glenn H. Beyer and J. Hugh Rose, Farm Housing, a volume of the Census Monograph Series, New York, John Wiley & Sons, 1958, pp. 32-33.

Several facts are obvious from these tables. First, the percentage of houses structurally unsound—i. e., dilapidated—is appreciably higher on farms than in urban areas. Second, the percentage lacking running water and the regular plumbing facilities is likewise appreciably higher on farms (for example, 40 percent of all farm homes still lacked running water in 1950). Finally, the percentage of farmhouses found to be substandard (defined here as dilapidated or lacking some of the facilities or running water) was appreciably higher among the low production farms.

In 1950 only 23 percent of the farmhouses of the Nation were considered standard—that is, if standard houses are defined as those that were not dilapidated and that had all plumbing facilities. Numeri-

cally, this amounted to only 1,318,800 units. On the other hand, 77 percent, or approximately 4,184,000 units, were substandard.[11]

The National Housing Inventory of 1956 has indicated some improvement in the overall housing inventory of the Nation between 1950 and 1956. It was estimated that during the 6-year period the number of substandard units (using the definition given above) declined from approximately 35 percent to approximately 25 percent.

While there are no data available, it is doubted whether a similar decline was experienced in the substandardness of farm housing. A number of factors may be cited as support for this conclusion. First, the existing condition of many of the farmhouses can undoubtedly be traced back to the generally low income of farm families from 1920 to the last world war. This situation prevented them from making any extensive repairs or alterations especially with regard to housing of tenants—who represented nearly one-third of the farm operators in 1950—before 1946, and they made few improvements after that time. (There has been a tendency for landlords to delay necessary repairs.) However, these low standards are not wholly governed by income. Tradition is a contributing factor. While modern communication and improvements in transportation have brought the farmer closer than ever to the urban dweller, farm families have for generations become accustomed to a way of life—in this instance frequently lacking running water and modern plumbing facilities—that yields only slowly to change. Finally, it has been pointed out (in table 79) that the highest proportion of dilapidated housing is found among two types of farms—class VI and residential farms. While it has been shown (in table 75) that there has been some decline in the class VI farms, the submarginal sort of farm, which is included under the classification of residential farms, may become an even more important part of the farm housing inventory than it was in 1950. In fact, if this group continues to have the most dilapidation, it might well be that there would be no overall improvement in condition between 1960 and 1970.

On the other hand, continued prosperity among some farmers, especially many of those on large-scale, large family-scale, and upper-medium family-scale farms (classes I, II, and III), would indicate that there has been some overall improvement in housing conditions from 1950 to 1960. If this improvement represented a sufficient number of units to constitute a 5 percent improvement of all the substandard farmhouses, the percentage of substandardness would be reduced to 72 percent in 1960 (from 77 percent in 1950). If there will be 5,100,000 farm households in 1960, this would indicate approximately 3,672,000 occupied substandard farmhouses that year. (On the face of it, this would indicate an appreciably larger decline, than 5 percent, in the number of substandard farmhouses from the total of 4,184,000 units in 1950, but it must be recalled that there has been a decline in the total number of units.)

Considering the factors listed above as operating against any appreciable increase in the number of standard units in the farm housing inventory, and with the anticipated leveling out of the number of farm

[11] Based on U. S. Bureau of the Census, 1950 Census of Housing, vol. III, Farm Housing Characteristics, table F. It should be noted that the figures in this volume differ from those provided in the Bureau's Current Population Reports, quoted earlier in this paper. The explanation is the difference in techniques used by the Census for these two reports.

households during the 1960 to 1970 decade, it is hardly worthwhile to attempt to project the minor, if any, downward trend in substandard farm housing for the years 1961 to 1970.

Therefore, unless there are certain new factors affecting a change, such as legislation (probably including extended credit facilities) for these families, the number of substandard units can be expected to remain around 4 million during the coming decade.

It would be hoped, however, that some changes in this picture could be effected so that those families who have set goals for improving their living standards generally, and their housing standards specifically, could satisfy their goals. These changes might include enlightened Federal legislation which would strengthen the small family farm operator, by assisting him in making technological adjustments and having other opportunities progress without overly burdensome risks.

Much needs to be done. For example, a very real problem concerns the high proportion of our farm families who still live in dilapidated housing—housing which is basically unsound and which cannot be economically renovated or improved. (Families living on class VI and residential farms are the most important group here.) For these families, the problem is one of finding a type of construction that, on the one hand, is low in cost and, on the other, can provide a decent standard of living. Continued research is needed to guarantee further technological advances and programs, including programs of rural development generally. Higher farm housing standards need to be encouraged, even among those farm families who live in units that are structurally sound but lack modern facilities.

It would be quite improper to argue that because one segment of our population represents a small proportion of the total numerically, it needs only to be given secondary consideration. Farm families—like the aged segment of our total population—represent a group not to be forgotten. Much additional information is needed, not only concerning the requirements of these families themselves but the relationship to them of the vast expansion that is taking place in our urban centers and the changes in standard of living among our urban workers. While production of foods and fibers has more than kept pace with the increase of our overall population, the families producing 95 percent of the foods that supply America's well-stocked larder, have not kept pace with the improvement in the standard of living of the balance of our Nation. Agriculture and that proportion of the population engaged in it must continue to be given the same attention as that given the balance of the Nation.

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II. SUPPLY FACTORS

A. Housing

TECHNOLOGICAL CHANGES IN RESIDENTIAL CONSTRUCTION, 1961–70

RALPH J. JOHNSON, Director, Research Institute, National Association of Home Builders, Washington, D. C.

This statement is prepared in response to the following questions:

> What are expected to be the principal technological changes in residential construction practices and in the physical components of construction during the period 1961–70?
>
> To what extent will these changes improve the quality of housing produced without increasing the unit cost, and
>
> How should Federal programs be supplemented or modified to support or enhance the potential contribution of technological changes?

INTRODUCTION

It is clear that the decade of the sixties will witness significant technological changes in home building. The exact extent, timing, and nature of these changes are not clear. Therefore, all of the statements contained in this monograph must be considered as rational projections on the basis of current knowledge, information, and trends rather than as precise predictions.

It should be recognized at the outset that "change" is the key word which may best be used to describe the character of the home-building industry. Changes to date and changes for the decade of the sixties have been and are expected to be of an evolutionary rather than revolutionary nature. As a prelude to describing projected changes, there is set forth a brief statement of the character of the home-building industry.

Character of the home-building industry

During the period since World War II, there has been more change in the character of the home-building industry than during all of the preceding history. Today, home building is a process wherein the builder through proper financing, land acquisition, and development, design, construction, and sale, literally combines thousands of pieces to produce housing for unknown buyers at a predetermined price. The lead time in this process may range from several months to more than a year. Before World War II, the majority of homes were built for a known buyer on a "sold" basis. Today, approximately 85 percent of the new homes are "manufactured" on a "for sale" basis. In

the course of this fundamental transition, home building has evolved from a craft to an industry.

Builder as a manufacturer

As a matter of fact, there are a number of analogies between today's home-building process and manufacturing. Both builders and manufacturers mass produce a finished product for sale to an unknown buyer. They each use component parts; make extensive use of machinery and equipment; engage in repeat operations on an assembly-line basis; make decisions and commitments on materials, design, and price a year or two before sale of final product; and finally, both literally create a new product as a result of their own production or manufacturing process.

It is basic to understanding the nature of change which may take place to recognize that in the actual construction process the builder is faced with the complex problem of putting together heterogeneous materials and products so they will fit, serve their in-place purpose, be attractive, and suit the market. This process is further complicated by the diverse elements which make up the home-building industry, namely: mortgagees; manufacturers of materials and equipment; the design professions; appraisers; the crafts; the Federal, State, and local regulatory, insuring, or guaranteeing agencies; builders; and, of course, the buyers. The mere existence of these separate elements of the home-building industry hampers the process of change.

The National Association of Home Builders and the National Housing Center have been working assiduously, for the past several years in particular, to bring together all of these elements so that the industry may work on a united basis in its efforts to produce a better quality house for a lower price in a concentrated effort to make good housing available to every American family. It is axiomatic that the rate of progress and change will be materially affected by the degree to which these various elements of the industry are able to work together for the common goal.

The objective of the NAHB research is to try to build a better quality house for a lower cost in all price brackets. This is an exceedingly difficult undertaking in an industry which is tradition-steeped, overregulated, diversified into literally thousands of segments and is expected to produce an infinite variety of end products for thousands of individual tastes and preferences in all geographical locations and climates, all in a broad price range.

Nonetheless, substantial progress toward reducing cost and improving quality has been made. According to a recent study (Construction Review, May 1958) of the Department of Commerce, the value index for new housing has increased 53 percent from 1947 to 1956, while the cost index (Boeckh—Residential) has only increased 39 percent. Further, the study states:

> Of all building types, the dwelling unit came closest to having cost savings offset the expense of added features * * * Among the gains made by home builders were the application of business-management principles to the extent of improving production engineering, the shortening of erection time, the decline in the percent of profit, the manufacture of component parts, the application of mechanization, the precutting and

prefinishing of materials, the development of systems of roof framing such as trusses which permit non-load-bearing interior partitions, and modular dimensioning. These economies came close to paying for such features as built-in appliances and air conditioning, improved plumbing and wiring, better quality windows and doors, double-glass windowpanes, additional closets, fire places, more masonry and expanded cabinetry of more expensive materials.

This significant contribution of the home-building industry during the past decade to the relative improvement in the value of the house was a predictable result of the beginning of the industrialization of the home-building process. It is clear that this process will continue and provide even relatively higher values in new homes in the decade of the sixties.

I. What are expected to be the principal technological changes in residential construction practices and in the physical components of construction during the period, 1961–70?

TECHNOLOGICAL CHANGES

The technological accomplishments and changes of the period since World War II and through 1970 will be keyed to certain basic and interrelated principles:

Reducing the total amount of on-site labor

The total man-hours of on-site labor to produce a house has been, is being, and will be further reduced. This is essential when even rough projections of housing demand and man-hours of available site labor are compared for the period of the sixties. This is also necessary, however, to maintain and improve the quality of the house as well as lower its cost. Productivity under factory conditions may be increased where machinery may be used to improve quality as well as increase quantity.

Increasing use of component parts

The use of component construction is rapidly increasing and will be accelerated during the decade of the sixties. In our terminology, a component is merely a larger part that fits with other parts rather than smaller pieces which must be cut and fitted on the site. In this context, component construction does not necessarily include or exclude what is now called prefabricated construction. The true component part also is as nearly finished in all respects and has as much labor done to it in the factory as possible. Furthermore, it is designed especially for use in the home-building industry so that its installation time may be reduced and so that it will best serve its in-place function or functions.

For example, in the NAHB research house built this year in Knoxville, Tenn., we used structural modular, exterior wall panels that had both interior and exterior skins factory applied, and contained insulation and necessary wiring. The interior skin (misty walnut finish masonite hardboard) was factory finished and required only minimal field labor to strip the protective film.

Improving production engineering management

Perhaps the greatest opportunity for improving quality and reducing cost rests in the possibility of improving the "production engineering management" of the construction process. In order to do this effectively, however, there must be aavilable component parts for the entire house which provide for wide flexibility in design of the end product and which serve multiple functions and, of course, fit with each other. It must also be possible to phase the on-site labor process in relation to the logical order of construction rather than as it is related to trades or materials. As home building in the sixties becomes more and more of a manufacturing process and as volume of sales increase, it will become more feasible for the builder to adopt such production engineering management processes.

Reducing the total construction time

In the decade of the sixties we may well expect to see houses built faster. There are not isolated instances today where builders are now building houses in 12 to 15 working days not including slab or foundation.

This speed-up in production scheduling leads to improved quality for the parts must be right and must fit. It also leads to significantly lower costs.

Aside from 1 day erection "stunts," we may expect to see production of a significant number of houses on a 5- to 8-day schedule in the 1960's. This will not be achieved, of course, with the custom-built house. However, progress along this line depends upon certain technological developments such as 1 coat 24-hour drying, taping, and spackling compounds for gypsum board; 1 coat 24-hour drying paints; the further development and acceptance of materials like certain plastics for plumbing lines; "wiring trees"; economical surface wiring, and more prefinished multipurpose structural components. These are all foreseeable for the sixties.

Combining functions of materials or equipment

The contribution that can be made by combining functions of materials can be illustrated by using the exterior wall as an example. Typically the exterior house wall has been composed of 12 to 14 layers. This has been necessary because each layer had a separate function. In the research house which the NAHB Research Institute built in Kensington, Md., in 1957, only 5 field-applied "layers" were required for the exterior wall, including 3 coats of exterior paint. This was possible because a single layer of material was developed to perform five functions, i. e., siding, sheathing, diagonal bracing, protection against wind uplift, and lateral rigidity for a perimeter beam which served as the top plate and incidentally eliminated at least 5 to 7 short pieces of framing lumber around each opening. In addition, a prefinished modular gypsum board "panel" was used as the interior surface. As multiple functions are incorporated in component parts, the price of the component part may be expected to increase but, conversely, the cost in place of this component part may be expected to be reduced when compared to the numerous pieces and layers which it replaces. Substantial progress has already been made in this direction and such progress may be expected to accelerate during the 1960's.

Integrating labor functions

Up to World War II, houses had always been built as a series of craft operations. Frequently one craft was delayed or stymied by the nonperformance at a specific time of another craft. Such interruptions and delays add costs which produce no value to the house and give support to certain of the inherent inefficiencies of the subcontracting system especially when the finished house is considered as a manufactured product. There are some indications today that on-site labor in the sixties will be integrated or phased in relationship to a logical order of building.

For example, one builder, who provides fierce competition, does not now use the subcontracting and trade approach to construction. Rather, he has 3 specially trained crews that do all required labor as necessary for the logical order of construction of the house in 3 stages. This allows him to build $35,000 to $38,000 houses on a customized basis within 30 calendar days including foundations and concrete work. The willingness of the industry to accept this concept and the ability to develop it further will control to a considerable degree the ability to improve quality and reduce price. If there are no artificial barriers erected to prevent acceptance of this practice, its use will spread in the sixties and its benefits made available to more and more buyers.

Modular dimensioning

The acceptance of modular dimensioning has been increasing rapidly and may be expected to increase in the sixties. It is inherent in the concept of component construction that the parts must fit with each other. This means that they must be dimensioned according to a widely used and recognized system. Modular dimensioning and construction saves material, increases productivity, lowers construction time, and reduces wastage. Its acceptance may be expected to be extended in the sixties into the field of mechanical equipment which is an important item in the cost of the home.

Improving materials handling

Better materials packaging and handling has already contributed to reducing the cost of construction. As more producers of materials and equipment are aware of the need to improve on-site materials handling problems, appropriate packaging to facilitate better handling will come about. For example, component structural parts can be stacked or wrapped or taped so that the first piece off the top of the pile is the first piece to be used in the structure. Furthermore, the entire package can be moved from truck to floor of house by machinery. There are also related purchasing and scheduling benefits. This practice will be extended in the sixties.

Increasing use of machinery and power tools

Important contributions have been made to the value of the house by the use of both heavy equipment and power tools on the site. Builders are using forklift trucks, carryalls, bulldozers, tractors, graders, machine seeders, excavating equipment, and even tree-hole boring equipment. There has been a sharp increase in the use of hand power tools such as saws, staplers, routers, planers, and even nailing machines. This use will continue and expand but the on-site use of hand

power tools will become less and less necessary as bigger and more nearly completed component parts become available.

Improving fastenings

There is an increasing use of glues and adhesives to fasten the various parts of the house together. There are something in the order of one-fourth million hand motions involved in the nailing of a house. Furthermore, most of the nails on finished surfaces must be set, puttied, and painted over. This is a time-consuming and costly operation. The advantages of gluing are substantial in many instances and more widespread use of this method of fastening awaits only wider knowledge of the properties of adhesives and the development of contact adhesives suitable for house construction use. We may confidently expect to see adhesives which will be factory applied and field activated. In many respects these will make an important contribution to improving the value of the house in the sixties.

We also expect to see in the sixties increased use of improved metal fasteners such as threaded nails, staples, and other mechanical fasteners. There will surely be new and improved mechanical devices to apply these connectors thereby reducing on-site labor time and increasing productivity.

Developing interdependent structural systems

The house today is built on the basis of each part being an independent structural unit. Obviously this is not so for if it were, the house would not be a house but merely a pile of pieces. Therefore, we may expect in the sixties to see the development of more interdependent structural systems which will permit more economical use of materials. In the sixties this will probably not mean that most of the houses will have an unusual structural form or shape. We may expect, however, that a few such homes will be built and that they will become more popular and marketable in the 1970's. This concept, however, will be more widely applied in the sixties, especially as it becomes possible to obtain acceptance by regulatory bodies of house designs engineered for the forces which they must withstand.

Producing products incorporating more factory machine time

Although this principle has been mentioned before, it is so significant that it is worthy of highlighting. In the sixties, we may expect to see more component parts which incorporate much more factory machine time and therefore require less on-site labor than at present. Furthermore, these parts will increasingly be made with much closer dimensional tolerances and of more dimensionally stable materials or at least the components themselves will be more dimensionally stable. As home building continues to become more of a manufacturing process, the industry will need component parts that have closer tolerances and which are more dimensionally stable. This in turn means more dimensional control and smaller allowable on-site tolerances. These developments will improve quality and shorten construction time, thereby contributing to cost reduction.

Developing new products, materials, and equipment

Typically there is a 5- to 7-year period between the development of a research idea and a marketable product. In the past several

years, there has been a marked increase in research on products designed especially for the home-building industry. This rate may be expected to continue to increase. Significantly this means that there will be numerous new products available to the home-building industry in the sixties. These will incorporate to an increasing degree the use of relatively new house-building materials of all kinds for many purposes and functions.

For the same reasons noted above, we may expect an increase in the use of aluminum, steel, and plastics. These materials will for the most part not be used as direct substitutes for other materials—for this approach has already been explored and virtually failed—but will be used in the development of entirely new product approaches and concepts.

SUMMARY I

In summary, technological changes in home building in the 1960's will be evolutionary rather than revolutionary.

The significant technological changes will take place within the framework of the above-stated principles. These changes are likely to come about bit by bit and piece by piece. The abilty to contribute to improved value of the end product will depend in large measure upon the ability of the industry to obtain acceptance of new materials, methods, designs, and products by all concerned.

On a relative price and fixed-dollar basis, it is reasonable to expect that the cost of housing per unit of quality and per square foot of space will not rise as fast as the cost of labor and materials. There will be increasing use of component parts, modular dimensioning, new materials, and new products. The houses will be built faster and, in general, the industry will continue to move in the direction of industrializing the home-building process so that, in effect, the house will be manufactured and the buyer will get an even better value.

BASIC FACTORS RELATED TO TECHNOLOGICAL CHANGE

There are certain other subjects related to technological change and progress which deserve discussion here.

Energy

No statement on technological changes and progress would be complete without some reference to developments pertaining to the useful harnessing of energy. On the basis of the current state of our knowledge, we may not expect to see individual household atomic-energy plants in the decade of the sixties. As far as is known today, this would present a scientifically insurmountable problem of the safe disposal of the radioactive waste byproducts of such reactors. Rather, we may expect to see a slight uptrend in the use of solar energy for household use. If there should be a technological breakthrough making it possible to capture solar energy and convert it to electrical energy on a much more efficient and economical basis than is now true, there could be almost revolutionary changes in the house. At the present time, the capital cost of the facility to collect the energy required to serve a house makes it economically infeasible to consider this as the prime source of energy for the home. On the other hand, improvements are gradually being made, and even now it is possible to convert

solar energy directly to electrical energy. Coal, gas, and oil will continue to be the prime energy sources for household purposes in the sixties. The use of electricity in the home will continue to expand.

Land use and community facilities

One of the critical factors affecting home building today and one which promises to be even more significant in the sixties is land use and community facilities. Actually, while the cost per square foot of the house has increased only modestly in the past decade, the cost of land on the average has more than quadrupled and the cost of land development has about tripled. Pre-World War II and immediately thereafter, a general rule of thumb widely accepted in the industry was that the finished lot represented about 10 percent of the price of the house. Today the lot represents about 25 percent of the cost of the house. This is particularly serious in that there is no known indication of any occurrence that might cause a slowing down or reversal of this trend.

It is obvious that in America there is plenty of land for residential purposes, certainly for the 1960's, 1970's, and 1980's, and even beyond that. Ordinarily one might expect that, as land is used farther and farther from the central city, its market price would decline because the area of such land that is available increases as the square of the distance from the heart of the city. Unfortunately this is not the case. In trying to analyze the principal reasons for this, it appears that one of the primary causes is the cost of providing water and sewerage utilities to make such land suitable for residential development. Of course, another important factor is the cost of streets, roads, curbs and gutters, sidewalks, and other community facilities and utilities.

Certain communities have compounded the problem by unnecessarily raising the construction standards with respect to lot size, type, thickness, and width of streets; requiring additional items such as underground storm drainage; wider sidewalks; deeper curbs, etc. This is especially applicable in the case of the lower priced house on the smaller lot. (Conversely and inexplicably such standards are typically relaxed by the community in the case of the higher priced house on the larger lot.) While all of these items may be desirable in the starry eyes of those establishing the standards, some steps should be taken to relate these standards to the ability of the people to pay for them.

Perhaps the greatest single contribution to reducing the cost of land and land development, and therefore the price of the house, would be the development of a satisfactory individual sewage disposal system which would free the land of its most expensive utility tie; namely, the sanitary sewer. There is no indication at present of such a unit being developed and made available on an economically feasible basis within the 1960's.

Research

Another problem related to technological progress in home building is the lack of a fundamental science of home building. Manufacturers and builders are plagued in their efforts to develop a new product or a new material or a good construction method or a new design by being forced to conform to a specification which requires

using an existing material, method, or deisgn. This is so because there exist only fragmentary or inadequate criteria by which to judge the performance of new products, methods, or designs and against which to engineer the new development. Even more fundamental is the lack of scientific fact which if it existed would enable rational decisions to be made about housing requirements rather than to penalize the buyer with necessarily costly requirements based on a conservatism founded in ignorance and opinion.

Therefore, technological progress and its acceptance will depend in large measure on the extent to which scientific laboratory data are developed, thereby providing a science of home building and providing the specific criteria and data by which to judge new developments. This will also make it more feasible to engineer houses for the needs of the people who occupy them and the forces, loads, and climate factors which they must resist.

II. To what extent will these changes improve the quality of housing produced without increasing the unit cost?

Almost anyone can improve quality as long as there are no restrictions on cost. To improve the quality of the home as a place in which to live without increasing its cost or actually reducing it, is the goal of the NAHB Research Institute. Even though this is a challenge of staggering magnitude, it is one which we believe can be affected bit by bit. It is clear to all of those in the industry that there will be no single sweeping change which in itself will greatly affect either the quality or cost of the house. This is so by the very nature of the house and the home building process.

It is necessary to try to define what is meant by improving quality in order to reply to this question. The quality of the home can be measured by three principal items:

(*1*) *Livability*

The livability or functioning of the home including the value of the home as a place in which to raise a family; achieve privacy, protection from the elements and other men; store one's belongings; provide for better enjoyment of an esthetically pleasing home environment; and, in general, enjoy the pride of ownership.

(*2*) *Comfort*

The quality of the home may also be measured by the degree to which it provides an environment that is safe, healthful (both physiologically and psychologically), provides reasonable control of noise (including sound transmission loss through walls, reverberation time, and reduction of transmission of impact noises), and provides a comfortable thermal environment.

(*3*) *Maintenance*

The quality of the home can also be measured by the amount and cost of required maintenance of the structure, materials, and equipment which it contains. Another corollary and important part of this is the amount and ease of maintenance of the house in terms of housekeeping.

Within the above framework of quality, it would be folly to expect that all of these measures of quality will be improved without increasing cost. For example, it appears that with improved construc-

tion methods, design, and production management that the unit cost of space will decline when measured against fixed dollars and when compared to rising labor and materials costs.

For example, in the NAHB research house built last year in Kensington, Md., we demonstrated a method of roof framing using economical wide span trusses which provide, in this particular house, 240 square feet of additional space for a cost per square feet of approximately one-third the unit cost of the other space. In our research house built in South Bend, Ind., this year, we utilized stressed skin interior and stressed skin exterior panels which not only performed structural functions but had a pleasing appearance and provided substantially increased insulation at little or no increase in building section cost. Likewise, in this house we utilized thin economical interior stressed skin partitions which are load bearing and reduce the cost of supporting the roof. These kinds of components and many others will provide improved quality of living without increasing cost.

Perhaps the most important aspect of housing quality is the amount of space which is provided per unit of cost and the way in which this space is arranged to facilitate living and the needs of families occupying that space. It may be said without question that the design of houses in the sense of improved utilization of space and space arrangement is improving and will continue to improve in the 1960's. This is a quality improvement which will be achieved at no increase in cost.

There will be an increased tendency toward the use of more maintenance free materials of both a structural and finish type. Aluminum and plastics may be expected to gain more widespread use for exposed parts. These will either be maintenance free or can be maintained easily instead of ultimately requiring replacement. On the interior of the house, improved films and materials will make the job of housekeeping easier. For the most part, these will be achieved without an increase in cost. Increased space and new developments in storage walls and interior partition design also will make it possible to provide more closet storage space. We may expect to see more economical devices for residential use that will materially reduce the level of dust which will certainly facilitate the housekeeping job. Such devices will be available at a nominal increased cost.

The current trend in terms of mechanical equipment included in the home appears to be one of "building in" obsolescence. There appears to be no reversal in this trend in sight, and there is no intention herein to editorialize on this. It may be said, on the one hand, that this is good, because it does not saddle the home buyer with a product so high in first cost that he must use it for the life of the house and, therefore, cannot replace it with rapidly improving new products. On the other hand, it may be said that this is not good, because it requires that this equipment be replaced at more frequent intervals. It may well be that the decade of the 1960's will see mechanical equipment installed on a monthly use charge basis with no capital expenditure by the home buyer and with a contractural agreement providing for periodic replacement and updating of this equipment.

The one dark cloud on the horizon is the matter of land use and community facilities. There appears to be no reversal in the trend of increasing cost of land and land development. Rather, more and more

the action of certain communities is having the effect of preventing new homes for average income families being built in their areas by raising the standards pertaining to lot size and land development. This is a regrettable tendency in America which began in the spirit of neighbors trying to help each other "raise the ridge" of their homes.

The quality of the housing environment or neighborhood is an important part of the quality of the home in general and will probably not be improved without substantial increases in cost unless governmental regulatory agencies are willing to accept significant changes in the pattern of land use and adjust the level of their requirements for lot sizes and improvements to the ability of the people to pay for them. Lot size and improvement requirements realistically related to a more normal proportionate cost for the lot alone, compared to the total cost of house and lot, would permit an economically feasible improvement in the total environment. For example, it would be possible to build in large king-size blocks with large interior areas devoted to parks and play space. This would mean fewer street crossings, safer neighborhoods, and more livable environments. But this is only possible, first, if planning and zoning bodies, mortgagees, and governmental insuring and guaranteeing agencies are willing to consider and accept such changes and, second, accept more realistic standards for individual lot size, improvements, house siting, and use.

SUMMARY II

The quality of the home will gradually be improved with a lesser proportionate increase in cost providing an increasing scientific body of knowledge can be developed and further providing that there is ready acceptance of changes based on this scientific information.

III. How should Federal programs be supplemented or modified to support or enhance the potential contribution of technological changes?

There appears to be four fundamental problems related to technological progress. *The purpose here is to identify those areas related to technological change which presently and in the 1960's will hamper progress toward improving the quality and reducing the cost of housing.*

Scientific knowledge

The most fundamental problem is the lack of a body of scientific knowledge concerning the actual performance requirements of housing and all of its elements. The home building industry is already burdened with a plethora of opinion and a lack of fact. In the absence of facts, all regulatory bodies naturally tend to be exceedingly conservative. This increases the cost of the house to the home buyer without producing any commensurate value. For example, a footing that is twice as wide as is necessary to support the house does not contribute to value of the home as a place to live but does increase its cost.

Accordingly, opinion and experience are substituted for fact and while a safe and adequate house is provided by such procedure, the most economical design becomes impossible of attainment. This is not to imply that the Federal Government should engage in studies concerning the performance of competitive materials, the develop-

ment of new products, or even use-studies of individual materials or products. However, scientific data is needed to provide the factual basis upon which to establish performance standards and requirements and recognized standard methods of testing various housing elements. These could then make it possible to provide the most economical design.

For example, relatively little factual information is available upon the actual structural design requirements of housing. This lack prevents a rational engineering design for the house structure. Another example of a research need is in the area of the basic sciences such as soil mechanics, soils engineering, and standard methods for determining the bearing capacities of soils for light loads. Yet, another kind of problem refers to a physical standard such as the permanance requirement of vapor barriers used under certain types of houses. It is doubtful if it is known within three orders of magnitude what this standard should be. Likewise, there is a great need for far more adequate statistical information relating to new housing in order to have such data available to use as baseline information. In addition, studies are needed to establish recognized standard methods of testing building sections which are realistically related to the actual performance requirements of the house. A simple example of this is the racking test for walls.

A contribution to reducing this problem would be made by expanding the housing related research activities of the scientific laboratories of governmental agencies such as the National Bureau of Standards, Forest Products Laboratory, and the Robert A. Taft Sanitary Engineering Center. Of course, if it were so desired, further impetus could be provided by making available to other scientific organizations, such as universities and research laboratories, funds to undertake appropriate studies in the basic sciences related to house construction. However, any such projects to be of maximum value to the Nation should be undertaken either to increase fundamental knowledge or to lower the cost of the house while maintaining quality.

Building and related codes

There are provisions of some national, regional, and local building, plumbing and electrical codes, zoning and subdivision ordinances, and even of Federal insuring and guaranteeing agencies which, in the opinion of some, unnecessarily increase the cost of housing. For example, it has been established that certain kinds of roof trusses are stronger and less expensive in place when placed 24 inches on center than typically required rafter and ceiling joist roof framing systems which are traditionally spaced 16 inches on center. Yet in some areas, truss roof construction is not acceptable or if it is, they are required to be placed 16 inches on center. This is just one small example of the codes problem.

The fundamental problem, here again, appears to be the lack of sufficient scientific fact and data upon which to base the design performance standards or requirements of the house and its elements. Although controls pertaining to real property are traditionally the responsibility of the States, some leadership in this area could be provided by Federal studies aimed at providing fundamental knowledge and information which could be used as a basis by all regulatory

bodies thereby providing a dynamic rather than a static body of building regulations.

Attitude with respect to change

The Federal mortgage insuring and guaranteeing agencies as well as mortgagees could assist with technological change by keeping abreast of new developments and being more willing to accept new designs, new products, equipment, and materials when they are developed. For example, the FHA could evaluate the differential risks of varying house designs and their elements on the basis of actuarial experience. They might then accept a very small percent of such units on a frankly experimental risk basis. This might result in some minuscule financial losses which, of course, would be covered by the total insurance premium. However, action to accept new developments and designs on this basis would greatly accelerate acceptance of innovations because of the position of leadership which is held by the FHA. Most importantly this would help to provide a whole new favorable climate for the more ready acceptance by all governmental bodies of the results of technological progress in home building.

Restrictive practices

It has been stated that onsite labor must be reduced if the quality of housing is to be improved and the cost reduced. There does exist a considerable reluctance on the part of many craft and trade organizations, particularly at the local level, to allow the use of labor-saving devices and equipment. For example, when paint is applied with a brush, the ratio of labor cost to material is in the order of 10 to 1. On the other hand, there are a number of paints and satisfactory spray-gun devices which make it possible to reduce this ratio to somewhere in the order of 2 to 1 or 1 to 1. Yet in many areas, building trades organizations are unwilling to allow the use of these devices. The home building industry cannot be expected to perform the miracle of improving quality and reducing cost while overloaded with cost pyramiding work restrictions and practices.

EXPECTED TECHNOLOGICAL DEVELOPMENTS IN HOME CONSTRUCTION, 1961–70

GEORGE PRICE, President, National Homes Corp., Lafayette, Ind.

This memorandum is submitted in regard to the following questions:

> What are expected to be the principal technological changes in residential construction practices and in the physical components of construction during the period 1961–70? To what extent will these changes improve the quality of housing produced without increasing the unit cost? How should Federal programs be supplemented or modified to expedite or enhance the potential contribution of technological changes?

Technological progress will be closely linked to the expansion of the prefabricated home industry with its potential for advanced production techniques and its ability to prorate developmental expenses. This progress will result in part from the need to maintain cost control in the face of expected material and labor cost increases as well as from the desire for improved quality.

Technical advances will be marked by a greater degree of prefabrication in the product of existing prefabricators, by an increase in the ranks of builders constructing prefabricated buildings and by the use of more prefabricated components and prefinished products by conventional builders. Building material suppliers will compete for the expanding market with products aimed more directly at specific end uses.

The next decade will bring rapid technological developments. These are expected to be the major changes in construction practices and in materials:

I. FOUNDATIONS

A major effort in the area of reducing foundation costs is anticipated and will most likely result in renewed emphasis on the floating slab. The success of this effort will depend upon the development of practical criteria for evaluating frost-heave in soil or upon the economical reinforcement of concrete, beyond that presently known, to resist differential movements within the foundation system.

II. EXTERIOR WALLS

Sandwich panel systems for load-bearing exterior walls with foamed or formed core materials supporting structural skins will make rapid advances against more conventional methods. The anticipated economics of these systems will demand high volume factory production of the components. Eight-foot-wide sheet materials with their inherent advantages in jointing and prefinishing will be an important part of these systems. Interior surfaces will maintain a traditional

appearance although prefinished, while exterior materials will tend toward extremely low maintenance surfaces with integral pattern and color.

III. INTERIOR PARTITIONS

The use of the same basic methods and materials described for exterior walls, but of lesser cross-sectional area, will occur in nonbearing partitions as a practical and economical system sooner than in exterior walls. Prefinishing and 8-foot-wide sheet materials will be of equal importance in this application.

IV. CEILING AND ROOF FRAMING SYSTEMS

Truss construction will be the standard method; wood will maintain its dominant position in this field, but the increased emphasis on engineered construction will produce a greater demand for stress-grade material. It is to be expected that a statistical basis for stress-grading of structural lumber will replace the present system of design values based on "the worst defects permissible in the grade." Prefabricated trusses will certainly be one of the components utilized by all volume builders. Improved connecting devices for wood will parallel this development, and high volume, economical production of trusses will place a premium on dimensional stability and controlled moisture content of the wood. Because of the economic disadvantages of the duplicate structural skins, sandwich panel construction will be limited to flat-roof or sloping-ceiling framing systems.

V. ROOFING SYSTEMS

Roofing systems will tend toward large sheets of a single material, or of several laminated materials, serving simultaneously the function of sheathing and roofing. Alternately, a distinct possibility for improved economics lies in the direction of field-applied, sprayed-on coatings over conventional sheathing materials. In either case, improved durability and lower maintenance will be a prerequisite for the success of these systems in competition with the more conventional methods.

VI. INSULATION

Current insulation materials for walls will not be required in combination with the sandwich panels previously described, but these materials will maintain their position for ceiling application in combination with trusses. Should the factory-produced wood frame wall remain a dominant system, increased labor and handling costs, plus expected technological advances in reducing the density of foamed plastics, will be likely to produce a change toward "foamed in place" insulation as a factory operation.

VII. VAPOR BARRIERS

Coatings developed for the prefinishing of interior surfaces will undoubtedly incorporate equal or improved vapor transmission resistance and will provide this feature more economically than present means.

VIII. ELECTRICAL WIRING

Surface-applied wiring systems combined, for economic reasons, with trim sections or heat distribution systems may be a necessary development for the success of sandwich panel construction.

IX. PLUMBING

A competitive situation between the traditional plumbing materials and the more recent plastic materials will develop with the opportunities for greater prefabrication favoring the newer materials. Progress in the standardization and modernization of plumbing codes will determine the degree to which the newer materials succeed.

Interest in the prefabricated "utility core" will be revived and will be of equal interest to both prefabricated and conventional builders. The basic idea is unquestionably correct and such a device will be marketed. Serious problems of space versus weight, flexibility versus mass production, and local regulations versus standardization must be solved.

X. HEATING

The present disadvantages of solar heat for residential heating will be overcome through improvement in the chemical storage of heat or equally as likely through ingenuity and inventiveness in the design of the storage and distribution system. Solar heat will become a significant development in large areas of the country.

XI. APPLIANCES

Reduction of required floor area will be achieved through further mergers of appliances into a single unit—a possible example being the washer-dryer-waterheater combination—with corollary savings in installation.

XII. BUILT-INS

Contingent upon the wider extension of long-range mortgage credit to include built-in furniture, these features will be a sales promotional device comparable to the position enjoyed by kitchen appliances during the present decade. Cabinets, chests, shelves, and storage wall units are typical examples of what may be expected. Emphasis will be on easily assembled prefabricated and prefinished case work, in combination with molded drawers.

XIII. ADHESIVES

Adhesives will see widespread use in factory applications for both structural and nonstructural applications. Progress in adhesive formulation is also expected to result in less critical application conditions and to open the way for field applied adhesives. Packaging of the adhesive for "foolproof" application will be an important consideration and may result in tapes and films being predominant in site work.

Present methods result in a structural system for the home that provides suitable and sufficient longevity for the basic structure. There

appears to be no incentive or justification for a major effort toward increasing structural longevity. Rather, it is to be expected that work in this area will be in the direction of producing equal durability at a lesser cost. Conversely, in the field of exposed surfaces and finishing systems the emphasis will be toward greater durability and lower maintenance, at equal cost.

The net result will be an overall increase in physical durability at equal or lesser cost. Savings effected may be reflected in overall quality such as improved design, increased area and sound control. They may also appear as sales promotional items featuring added convenience. The feasibility of these savings being utilized to increase house area will to some extent depend upon land development costs which may, for some time to come, prevent significant expansion in lot sizes.

Following here are general recommendations as to how Federal participation might encourage these developments:

I. A stable housing market is basic to long range research investments within the industry. Fluctuation if interest in housing research has the effect of reducing trained personnel and adequate facilities. Any action that will tend to stabilize the housing market will reap the additional benefit of encouraging technological progress within the entire home building industry.

II. Few performance criteria exist today for the evaluation of new methods, especially where these incorporate a variety of functions in a single construction. A review and revision of existing criteria for each function and an overall rating system must be devised. Such standards must be compatible with both the principles established by basic research and with the known performance of conventional materials and methods.

III. Federal sponsorship of research through established universities and research organizations is recommended. This must be basic work aimed at producing more accurate estimates of design conditions and applied research with the goal of determining acceptable performance under these conditions. The industry research effort in individual materials and in assemblies of materials will benefit from such work and from the more accurate standards that they might be expected to produce.

IV. Federal participation in encouraging standardization of regulations is desirable. An effort should be made toward standardization of both performance and specification requirements and ideally this should extend to all Federal agencies and at all levels. Encouragement of standardization among local municipalities that also regulate construction can, perhaps, be best achieved through the development of performance requirements (as described in II and III) of sufficient stature and authority that they are acceptable to all interested parties.

V. An incentive must be maintained for inventiveness, ingenuity and production efficiency within the industry. Where the exercise of these effect savings but result in inordinate penalties in valuation, that incentive is removed. Competitive pressures within the industry may be relied upon to maintain an equitable relation between cost and sales price.

VI. Encouragement of uniform legislation permitting the extension of mortgage credit to built-in furnishings is desirable.

REQUIREMENTS FOR BASIC RESIDENTIAL CONSTRUCTION MATERIALS DURING THE 1960's

JOSEPH L. FISHER, Associate Director and Secretary, and EDWARD BOORSTEIN, Economist, Resources for the Future, Inc., Washington, D. C.[1]

This memorandum is submitted in response to the following questions:

> What are the prospects for an adequate supply of basic residential construction materials during the period 1961–70? To what extent will the cost of basic materials increase or decrease the per unit cost of housing? How should Federal programs be supplemented or modified to improve prospects for an adequate supply?

PROJECTIONS OF DWELLING UNIT CONSTRUCTION: 1960–70

To try to answer the foregoing questions, we have prepared the following projections of dwelling-unit construction for the period 1960–70.

TABLE 80.—*Projections of dwelling unit construction, 1960–70* [1]

[Thousand dwelling units]

1955	1960	1965	1970
Low	1,150	1,380	1,750
Medium, 1,500 [2]	1,400	1,600	2,100
High	1,600	1,900	2,700

[1] All dwelling units farm and nonfarm, permanent and nonpermanent.
[2] Rough estimate based on estimates for permanent units from Timber Resources for America's Future, U. S. Department of Agriculture, January 1958, p. 379, plus rough allowance for nonpermanent units by us

These projections are based on two factors: (1) The net addition to the total stock of dwelling units as determined by household formation, estimated on the basis of Bureau of Census population projections and (2) the construction required for replacement of units expected to be withdrawn from stock, estimated on the basis of past trends in withdrawals during periods not characterized by abnormal circumstances such as depression and war.

We deliberately present a range of possibilities because of the many uncertainties which are inherent in projections of dwelling unit construction, and because of the sharp fluctuations which have characterized this activity in the past, including the recent past. But of the three projections, we believe that the medium projection provides the best present indication of what is likely to happen, given a high level of economic activity. The low and high projections are intended to provide an idea of the limits within which dwelling unit construction may fall; but we regard each of these projections, taken

[1] Statistical estimates and interpretations are those of authors.

by itself, as far less probable than the medium one. We believe it to be unlikely that actual dwelling-unit construction will fall outside the range indicated, short of an unusual circumstance such as a prolonged recession, a radical change in credit or other institutional arrangements with respect to housing, or a major change in design, materials used, or construction methods.

The following conclusions may be drawn from the table: Given an estimated 1.56 million new permanent dwelling units built in 1950, and 1.47 million in 1955,[2] the number of new dwelling units built at the beginning of the 1960's will probably not be higher, or at least not substantially higher, than peak levels already achieved in the past. But beginning somewhere around the middle of the decade, dwelling-unit construction will probably begin to consistently exceed past peak levels, moving toward new peaks substantially higher. Dwelling-unit construction will probably run roughly from about 1.6 million around 1965 to about 2.1 million around 1970, the latter level being about 30 to 40 percent higher than the previous peaks reached in 1950 and 1955. It is entirely possible that the upsurge in dwelling-unit construction will begin somewhat prior to 1965, and will, in individual years at least, reach levels significantly higher than the 2.1 million level, perhaps going as high as 2.7 million units. Finally, it is conceivable that dwelling-unit construction, although moving at generally high levels, will not greatly exceed past peak levels until late in the decade. But even on the most modest assumptions that can now be reasonably made, it is very likely that past peak levels will be exceeded substantially some time between 1965 and 1970.

THE SUPPLY OF MATERIALS: GENERAL CONSIDERATIONS

Residential construction uses a large number of materials in a wide variety of forms. Whether or not these materials will be in adequate supply is not just a question of the adequacy of the basic resources but also of the specific capacity to produce the particular items required and transport them to the sites where they are to be used. Thus, for example, it is possible to have an adequate supply of steel as such, but run into a shortage of I-beams; or to be able to produce a large supply of lumber and run into a bottleneck in the freight capacity required to transport this lumber to the locations where it is to be used. Because of the limitations of time, the inadequacy of the available statistical data, and the uncertainties inherent in the problems, it is possible for us to consider statistically and in detail only a few of the principal materials entering into residential construction.

We venture to say, however, that general considerations warrant the overall judgment that there will be substantial tightness of supply for a significant number of the materials and items entering into residential construction during the period 1965–70. This judgment is essentially based on three considerations:

First, the pattern which residential construction is likely to follow during the sixties. During the early years of the decade, residential construction will probably run at moderate levels, which will not place much strain, if any, on capacity, and then toward the middle of the

[2] Timber Resources for America's Future, U. S. Department of Agriculture, p. 379.

decade it will probably surge upward fairly rapidly to new very high levels requiring a substantially increased capacity for a large number of items.

Second, the nature of the construction materials industries. To a considerable extent, capacity in these industries is not only a matter of basic plant and equipment, as, for example, in the steel or aluminum industries, but of maintaining an ample base in the fabricating industries from which expansion can readily take place. This means a sufficient number of going, working organizations of various sizes, adequate trained manpower, keeping marginal firms in the market, and so forth. The key factor in increasing and maintaining capacity is the pressure of actual or imminent demand. Given this, the very pattern which residential construction will probably follow in the sixties is likely to make for problems; the moderate level of residential construction and the easy supply situation that will probably prevail in the early years will not be conducive to the large increase in capacity and supplies that will be required in the latter half of the decade.

Finally, the overall economic situation. A high level of residential construction is generally accompanied by high levels in nonresidential construction, household furniture, many consumers' durable goods, and so forth. Further, given the basic importance of the construction industry, the magnitude of the probable upsurge in residential construction in the latter half of the sixties is such as to suggest that the economy as a whole will be operating at a high level during that period. This would mean a high level of competing demand for many of the materials going into construction, and would tend to make for and aggravate supply difficulties in residential construction.

Thus, while it is very difficult to pinpoint all the various specific supply difficulties that may occur and indicate how transitory or long lasting they are likely to be, the general presumption seems warranted that there could be supply problems of significant proportions in the second half of the 1960's.

PROJECTED REQUIREMENTS FOR LUMBER, STEEL, AND ALUMINUM

We shall limit our specific consideration of basic residential construction materials to three, namely, lumber, steel, and aluminum. We present the discussion of these three items in the hope that they will serve as useful illustrations of possible situations and problems, recognizing that a complete analysis would require much more detail and a consideration of many more materials and items, such as cement, bricks, gypsum board, and so forth.

Lumber

The following table presents projections of the amount of lumber required for residential construction, derived on the basis of the projections of dwelling-unit construction:

TABLE 81.—*Lumber requirements for new residential construction*

[Billion board-feet]

	1952	1960	1965	1970
Low		11.0	12.4	15.4
Medium	13.0	13.4	15.1	19.4
High		16.2	18.8	27.3

The low projection is based on the assumption that the average amount of lumber use per dwelling unit will go from about 9,700 board-feet in 1960 to 9,200 in 1965, to 8,700 in 1970. In the medium projection the corresponding figures are 9,700, 9,500, and 9,250. In the high projection, it is assumed that average lumber per dwelling unit remains constant at 10,000 throughout the period. These assumptions are essentially judgments made by us, based on data on trends in the average amount of lumber per dwelling unit given by the United States Forest Service in Timber Resources for America's Future. As can be seen from the foregoing figures, the major factor in the width of the range is not the variations in the assumption as to lumber used per dwelling unit, but in the range in the projections of dwelling unit construction. Given an estimated use of about 13 billion board-feet of lumber for residential construction in 1952, it can be seen from the table that lumber requirements will probably increase substantially by 1970. On the most probable projection, about 20 billion board-feet will be required in 1970, or over 50 percent more than in 1952. It is also conceivable that at least in some years, lumber requirements may be on the order of 27 billion board-feet, or over 100 percent more than in 1952.

Total lumber production in the United States during 1950 to 1956 has ranged from about 36 to 38 billion board-feet, with net imports ranging from about 1.5 to 3 billion. Residential construction has been absorbing roughly a third of total consumption. An increase of roughly 7 to 14 billion board-feet in the demand for lumber for residential construction would clearly constitute a substantial addition to overall demand. If as generally happens, a high level of nonresidential construction accompanied the high level of residential construction, the overall increase in lumber demand would be still greater. It is unlikely that the continuing substitution of other materials for lumber could compensate for more than a part of the potential increase. It seems likely, taking roughly into account all the various uses of lumber, that the projected rise in residential construction will be instrumental in pushing the total demand for lumber to a level of say 50 million board-feet, or about 25 percent higher than the peak levels of recent years—and it is entirely possible that the demand will go still higher. While it may be possible to increase net imports, perhaps by 2 to 3 million board-feet, the great bulk of the probable increase in demand will have to be met from domestic output.

The increase in the demand for lumber will tend to create a tight supply situation, and could easily cause substantial supply difficulties. It may be difficult, at least during certain periods, for the residential construction industry to get all the lumber it could use. And the tight supply situation will tend to exert upward pressures on lumber prices.

Steel

The following table presents rough projections of the amount of fabricated steel products such as structural shapes and hardware required for residential construction during 1960–70.

TABLE 82.—*Projections of fabricated steel required for residential construction, 1960–70*

[Million tons]

1955	1960	1965	1970
3.0	2.4	2.6	3.2
	2.8	3.0	4.0
	3.2	4.0	4.8

This table is based on a rough allowance of 2 tons of steel per dwelling unit;[3] it does not take into account possible variations in the use of steel per dwelling unit in the future.

The table indicates for 1960–70 a demand for fabricated steel products for residential construction ranging between about 2.5 to 5 million tons; and this compares with shipments of finished steel during the years 1955–57 of about 80 million tons or more each year. Given the relatively small portion of total steel shipments taken by residential construction, the question whether steel will be in adequate supply for this industry depends on the overall supply and deman situation for steel—the relations between steel capacity and output on the one hand and the demand for steel for the automotive, oil, machinery, and container industries, and for nonresidential and residental construction on the other hand.

Moreover, the question of the adequacy of steel for residential construction depends not only on whether the overall supply of steel is adequate to meet the various demands for it, but whether the supply of specific types used in residential construction, for example structural shapes, reinforced bars, etc., will be adequate. Adequacy of the overall supply does not preclude shortages, at least for a time, of specific types.

Aluminum

It is difficult to estimate with precision from the available statistics the average amount of aluminum used for each dwelling unit constructed at the present time, and even more difficult to estimate how much this amount is likely to increase over the next 10 years. It has been estimated roughly that the average amount of aluminum going into new dwelling units is about 40 to 70 pounds.[4] There seems to be general agreement that the use of aluminum in housing construction will increase greatly in the future, and, as a rough guess, it might

[3] The Housing Almanac, National Association of Home Builders, 1957, p. 73, indicates requirements of 200,000 tons of steel for 100,000 homes.
[4] Aluminum Moves Into Housing, Iron Age, August 27, 1957, p. 66.

go up to from 5 to 10 times the present level by 1970. Taking the present level at very roughly 60 pounds per dwelling unit, this would mean an increase to about 300 to 600 pounds per dwelling unit.

On this basis and taking the medium projection of dwelling unit construction, the use of aluminum in new residential construction might rise from a present level of about 50 to 70 million pounds to about 600 to 1,300 million pounds by 1970. On the basis of the high dwelling unit projection, the demand might go up to about 800 to 1,600 million pounds. Even on the basis of the low dwelling unit projection, the increase would be very great; the demand would go up to about 500 to 1,000 million pounds. These figures can be compared to overall aluminum shipments of about 4,000 million pounds in 1955 and 1956.

Thus, it appears likely that housing will tend to add considerably to the overall demand for aluminum in the next decade. And to this should be added the fact that the use of aluminum in nonresidential construction is also increasing.

Whether or not aluminum will be in tight supply for housing during the next decade depends not on housing alone, but on the rate of increase in aluminum production capacity, and on what happens to demand for other uses. Aluminum output and shipments will undoubtedly increase greatly during the period to 1970. Increased use of aluminum will tend to relieve somewhat the pressure on other materials in which the supply situation may be tight. It is possible that a tight supply situation for aluminum in housing may develop. But the main effects of this would probably be to slow the rate of technical substitution, and increase the possible pressure on other materials.

THE PRICES OF MATERIALS AND HOUSING COSTS

The prices of construction materials during the next decade will depend on many factors including overall monetary and fiscal policy, the movement of the general price level, wage rates, technological developments, etc., and it is far from certain what will happen. But the general presumption that there will probably be a tight supply situation for many building materials in the latter half of the next decade indicates that there will probably also be general pressure on prices, although technological advance and increases in productivity may offset this pressure in some cases. It seems especially likely that there will be pressure on lumber prices, not only because of the probability of a tight lumber situation, but also because of the tendency of lumber prices, throughout most past years, to rise faster than the prices of commodities in general. It has been estimated, for example, that between 1900 and 1950 the price of lumber rose 190 percent more than the price of commodities in general.[5]

The possible effect of the price of materials on the per unit cost of housing must be considered in the light of the portion of total housing costs accounted for by these materials. Again data are scanty, but available information indicates that materials account for very roughly 40 to 50 percent of total capital costs; cost of site construction labor, contractors, and subcontractors, overhead and profit, and the

[5] Timber Resources for America's Future, p. 416.

cost of land and land improvement account for the remainder.[6] Interest costs for the contractor's or developer's working capital or for mortgages of ultimate owners are not included. Available price and other data indicate that the cost of the lumber alone in the average dwelling unit constructed at present is in the general neighborhood of $1,500 or about 10 percent of total cost.[7]

It seems clear that increases in the prices of materials, which account for 40 to 50 percent of the total capital housing costs, could have substantial effects on total costs. Even an increase in the price of lumber alone could be of significance. For example, given past trends in the relative price of lumber, an increase of 20 to 30 percent over a period of, say, 3 years in a tight supply situation, possibly in the latter 1960's, is entirely possible. Such increases could add roughly $300 to $450 to the construction cost of a dwelling unit. Increases in the materials component of costs may tend to be accompanied by increases in other components, such as profit margins and labor.

A tight materials situation may affect residential construction costs, not only through higher prices of materials, but also by causing disruptions in the construction process. Inability to obtain materials and items when required, including often relatively unimportant items, can easily cause interruptions and delays whose cost is far greater than that of the material or item itself.

The effect of supply tightness and price increase on total construction cost should be gaged in the light of the fact that construction costs have been rising more rapidly than the general price level and that if this trend were to continue unchecked, some buyers would be priced out of the market.[8]

FEDERAL POLICIES AND PROGRAMS

This brief review and look ahead at the supply and cost prospects for residential construction materials during the 1960's brings out several highlights:

1. The estimated number of dwelling units that will be constructed will move upward somewhat over the levels of recent years to the mid-1960's, but will exceed only slightly the high reached in 1955. Thereafter, as the high birthrates which began in the mid-1940's result in high rates of family formation, housing construction inevitably will rise rapidly with the estimated 1970 level surpassing 1960 by nearly one-third.

2. Demand for housing construction materials of all sorts may be expected to rise in step with this trend and to be magnified somewhat as more and more families want and can afford larger houses and second houses for vacation purposes. Offsetting this effect somewhat, but probably not completely, may be increased efficiency in the use of materials through further progress in prefabrication and other techniques.

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[6] See, for example, Housing Costs, Where the Housing Dollar Goes, National Housing Agency, Washington, D. C., December 1944, where it is indicated that materials account for about 45.7 percent of total costs. (These are old data, but seem to be the best available.)

[7] In the 1944 study of housing costs referred to above, the cost of lumber alone (excluding millwork) is given as 11.85 percent of total housing costs.

[8] See for example Housing Demand in the United States, 1957–65, Bureau of Labor Statistics, U. S. Department of Labor, preprint No. 2273 from Monthly Labor Review, February 1958, pp. 3 and 4.

3. Demand for the several principal construction materials seems certain to increase rapidly after the mid-1960's with variations among them in the rate of growth depending on changes in consumer preferences, new technology bringing cost reductions and substitutes, and increasing relative scarcity.

4. Lumber would appear to be the major foreseeable supply problem. By 1970 demand for lumber for residential construction may be half again as much as it is now. The price of lumber relative to materials generally has been rising over a longer period of years reflecting the increasing shortage of higher grade saw timber. A continuation of this tendency, heightened in the latter 1960's by new demand, may well spell difficulty.

5. For the two other materials considered, steel and aluminum, the demand for housing construction is only a small fraction of total demand. One cannot predict a supply or price problem for them resulting from housing demand; the total market for their materials would have to be analyzed. However, to the extent steel, aluminum, and other substitutes come into use, the pressure on lumber will be lessened.

With these highlights in mind we turn finally to the matter of Federal policy and programs, particularly those which might improve prospects for the supply of construction materials. It should be made clear that housing policies and programs, certainly in the credit field, while they affect building materials, are engaged for other purposes mainly, such as offsetting business cycle movements or helping to provide needed housing. Policies and programs dealing generally with housing and housing credit bear upon many facets of the housing industry besides building materials. Lumber, steel, aluminum, and other materials are used for other purposes besides houses, and therefore numerous nonhousing factors play upon their demand and supply. To try to solve what is primarily a problem of supply of a building material through housing credit policy would be clumsy, although it is perfectly clear that changes in housing credit terms will have a bearing on the supply of materials.

In addition, the problems of Federal policies and programs with respect to housing require specialized knowledge in a variety of areas and more time and study than we have been able to give to them. We present the following, therefore, simply as suggestions for further study and consideration rather than definitive recommendations.

First, as a general proposition, it would be of great assistance in meeting problems of the second half of the 1960's to keep residential construction at a reasonably high level in the early sixties, through Federal action in credit and other fields. Increased construction during the early years would have the double effect of dampening somewhat the high demand for new dwelling units in the later years, and also, by maintaining some pressure for expanded output in the materials and construction industries, help keep them in a better position to meet the upsurge of demand that will probably occur in the later years.

Second, because of the importance of lumber and the tightness of supply and pressure on prices that will probably occur, basic Federal policy with respect to forestry and lumber should be reconsidered. Consideration, for example, could be given to the following: (1) in-

creasing road construction to the more inaccessible forest areas, especially in the West; (2) extending the programs for thinning and other stand improvement measures to accelerate timber growth; (3) a variety of measures, including centralized and group management programs, to bring about continuous timber production from smaller, privately owned forest lands; (4) stimulation of research over a wide range of possibilities from basic tree genetics to development of wood product and other substitutes for high grade saw timber. Consideration might also be given to providing assistance, such as rapid tax amortization and special credit facilities, to lumbering enterprises to help speed programs for mechanization and improvement of facilities.[9] Fortunately there appears to be a several year grace period before the major homebuilding expansion due in the second half of the 1960's, during which time more fundamental but slower acting policies and programs can be set in motion.

Third, the Federal Government should take the lead in encouraging the continuous revision and bringing up to date of building codes and related standards of housing credit agencies. The existing codes and standards, some of them extremely antiquated, tend to cause a wasteful use of traditional materials, discourage the use of new materials, and hinder the rationalization and improvement of the construction process. The resulting addition to total construction costs and hindrance to the substitution of new or cheaper materials are great. In the revision of codes and standards, encouragement should be given, wherever consistent with sound building practice, to the increased use of building board, aluminum, asphalt and tile flooring materials, etc.

Fourth, more attention should be given to longer range estimates of housing demand, supply, and cost and to the associated requirements for building materials. More plentiful and better quality statistics would help especially if these were matched by more analytical facilities. Within severe limitations of funds good work of this sort is now done in government and the industry; more is needed. Only in this way can the framework within which policies are established and carried out be made more adequate for the task.

[9] For a more detailed discussion see An Estimate of Capital Needed in Forestry To Meet Projected Timber Requirements for the Year 2000, by Charles Stoddard. (Washington: Resources for the Future, July 1958.)

RESIDENTIAL CONSTRUCTION LABOR SUPPLY AND COSTS, 1961–70

EMERSON P. SCHMIDT, Director, Economic Research, Chamber of Commerce of the United States, Washington, D. C.

The following memorandum was prepared in response to this question:

> What are the prospects for an adequate supply of residential construction labor during the period 1961–70? To what extent will the per unit labor costs increase or decrease the per unit cost of housing during the period 1961–70? How should Federal programs be supplemented or modified to improve prospects for an adequate supply?

The first two questions raised are not capable of clearcut response, nor can any response be made with any meaningful finality.

Even if the first one could be answered satisfactorily, it might be argued that the effort would not be worthwhile, because labor mobility and individual incentives will assure an "adequate" supply of construction labor, if no artificial restraints are put in the way. The word "adequate" has no meaning, except in terms of voluntary participation of workers in construction trades and the demand for their services in alternative employments.

We might put the matter in another way, in the form of a different question: Has any effective demand (desire coupled with ability and willingness to pay) for any commodity or service ever remained unfulfilled for any extended period because of the scarcity of common or skilled labor? Except for very short periods such as a few days or weeks, it would be difficult to identify any significant consumer demand in peacetime which has ever been left unsatiated because of a scarcity of labor. Thus, it might be argued that this question enters needlessly into an arena where market forces can be relied upon to furnish the correct answer, providing no *artificial* restraints or stimulants are put in the way of these forces. It is the function of the free market, the free price (wage) system and the self-interest motive to allocate human and other resources in response to free consumer demand.

If, on the other hand, artificial forces attempt to overstimulate housing starts, when the remainder of the economy is in a buoyant state, an apparent shortage of both labor and materials might occur.

Projections of construction activities throughout our economy and of technological and other changes which are likely to condition the demand for construction labor and the several skills involved may be useful in improving foresight and in adjusting construction capacity, including labor training and recruitment, to long-run trends.

Total construction activity trends, however, will not be of much help to a youngster seeking vocational guidance, unless these totals can be

broken down into such components as bricklayers, plasterers, carpenters, electricians, etc., and in terms of local conditions. If such projections for total activity and technological changes reflecting differential demands for the several skills were made and found reasonably reliable, they would provide clues for vocational counselors, directors of apprenticeship training programs, and others who might want to deal with the issue. (See Occupational Outlook Handbook, 1957 Bureau of Labor Statistics, for general discussion as well as trade-by-trade analysis.)

But even apart from such projections, it does not seem probable that residential construction will suffer from lack of labor, unless we allow artificial restraints or restrictions to impede free entrance. Any short-run shortages, furthermore, could be mitigated by accelerated training, some shifting of personnel, shifting of design or components and increased money incentives, or some combination of these.

Construction technology, demographic and economic factors will remain dynamic. Population will grow very greatly, the labor force will expand and its structure will change, and the rate of household formation will shortly rise from the recent levels. Average real income per family should rise and, possibly, raise the demand for more space and better accommodations. These forces and factors cannot be forecast with accuracy or precision.

POPULATION PROJECTIONS

The most recent (revised) Bureau of the Census population projections suggest the possibility of a considerably greater growth than previously projected and a need for more housing. From a present population of about 175 million, the highest of the four current Census projections reaches almost 200 million in 1965, as shown by the accompanying tabulation (series P–25, No. 187, November 10, 1958).

TABLE 83.—*Census projections of total population, 1960 to 1980*

Year (July 1)	Revised Census projections of total population			
	Series I	Series II	Series III	Series IV
1960	181.2	180.1	179.8	179.4
1965	199.0	195.7	193.6	191.5
1970	219.5	213.8	208.2	202.5
1975	243.9	235.2	225.6	215.8
1980	272.6	260.0	245.4	230.8

Within another decade, by 1975, the figure would rise another 45 million, and reach a total of nearly 273 million by 1980—about 22 years hence. This (the highest of the current 4 projections) would represent an increase of nearly 100 million (97.5 million) from mid-1958 to 1980. The lowest projection suggests a population of 231 million in 1980—still 56 million above the present figure.

While even the highest of the several projections of the Bureau of the Census issued from time to time have understated population growth, it is possible that the actual growth rate will fall somewhere between the highest and the lowest figure of the current projection shown in the table. Whatever the actual outcome, it is clear that

population will expand greatly and the potential demand for construction, including housing, will be very large. While those to be born in the next two decades will not, except to a very limited degree, form households of their own, they will be added to the population to be supplied with housing. Thus, the prospective population burst is a factor which will tend to increase the demand for housing space and residential construction labor.

But in making this rather obvious observation, we should not overlook the fact that other sectors of the economy—nonresidential construction and nonconstruction economic activity—will also grow and require most of the expanded labor supply. Residential construction labor demand will have to compete against these other uses of labor.

THE LABOR FORCE

The size and the structure of the labor force depend heavily on previous births and birth rates, but other factors are also influential.

According to the United States Department of Labor, the total labor force in the period 1955–65 will rise from 60.3 million to 70.3 million, and to 82.4 million by 1975 as shown by the table. A sharp rise in the youngest age groups—14 to 24—is expected between 1955 and 1965. But there will be very little change in the young adults from 25 to 44 years of age, suggesting the possibility of reduced supplies of skilled labor; and there will be substantial growth in the numbers 45 years and over. (See Monthly Labor Review, December 1957.)

TABLE 84.—*Persons at work by full-time and part-time status, by sex, annual averages, 1955 and projected 1965 and 1975*

[Millions of persons 14 years old and over]

Sex and hours worked	1955	1965	1975	Net change from—	
				1955–65	1965–75
Both sexes, total at work	60.3	70.3	82.4	10.0	12.1
Full time	49.9	56.3	65.5	6.4	9.2
Part time	10.3	14.0	16.9	3.7	2.9
15 to 34 hours	7.8	10.2	12.3	2.4	2.1
1 to 14 hours	2.6	3.7	4.6	1.1	.9
Males, total at work	41.4	46.1	53.5	4.7	7.4
Full time	6.2	39.3	45.4	3.1	6.1
Part time	5.2	6.8	8.1	1.6	1.3
15 to 34 hours	4.0	5.1	6.1	1.1	1.0
1 to 14 hours	1.2	1.7	2.0	.5	.3
Females, total at work	18.8	24.2	28.9	5.4	4.7
Full time	13.7	17.0	20.1	3.3	3.1
Part time	5.1	7.2	8.8	2.1	1.6
15 to 34 hours	3.7	5.1	6.2	1.4	1.1
1 to 14 hours	1.4	2.1	2.6	.7	.5

NOTE.—Detailed data shown in table B.
Source: Bureau of the Census and Bureau of Labor Statistics.

In the decade 1965–75, the labor force is expected to increase by about 12 million. But, unlike in the previous 10-year period, there will be a substantial increase in the number of men 25 to 44 years of age—approximately 3.5 million. About 1.6 million men 45 years and over will also be added. Although women engage in little construction activity directly, any addition of women to the labor force will help to augment its total supply, and thereby release greater numbers

of males for other employment. The increase in the number of adult women workers will probably be smaller than in the period 1955–65. The number of young workers under 25 years of age will continue to increase by about the same amount as in the preceding 10 years—over 4 million.

HOUSEHOLD FORMATION

While the increase in the number of households in our economy is a major factor in the demand for new housing, and, therefore, construction labor, other demand factors are also important.

Demolitions, abandonments, and other losses of the housing supply are likely to increase from recent rates estimated to be around 300,000 to, perhaps, a third or more higher. The migration and mobility of our population since the end of World War II greatly added to the demand for housing; but it is generally believed that, with the exception of a few areas, the population now has adequate freedom to move insofar as housing availability is concerned. Barring large and rapid regional shifts or drastic curtailment of housing growth, vacancy rates should remain sufficiently high to accommodate normal migration and mobility.

In addition, increased demand for housing comes from an attempt to improve housing conditions; and if the cost of new housing is in line with other living costs, some increase in the demand for housing could come from this natural tendency to upgrade our housing standards. Increase in the teen-age population (relatively and absolutely) will likely enlarge the size of housing per family (separate bedrooms, recreation and, we may hope, study rooms, etc.).

According to Bureau of Labor Statistics-Bureau of the Census projections, a net increase in households will average about 755,000 annually between 1957 and 1965, as shown by the accompanying table.

TABLE 85.—*Households in the United States, 1950–70* [1]

[In thousands]

Item	*Total, all types*
ACTUAL	
1950	43,554
1957	49,543
Average annual increase, 1950–57	856
CENSUS BUREAU SERIES II PROJECTION	
1960	51,573
Average annual increase, 1957–60	677
1965	55,579
Average annual increase, 1960–65	801
Average annual increase, 1957–65	755
1970	60,762
Average annual increase, 1965–70	1,037

[1] Monthly Labor Review, February 1958, p. 143.

This will be about 100,000 less than the average increase in households from 1950–57, reflecting the low birthrate of the 1930's and early 1940's. The average annual increase from 1960–65 will be 801,000, or about 18 percent higher than from 1957–60.

Beginning about 1965, annual net additions to households will begin to exceed the average of the past several years by a wide margin, reach-

ing in excess of 1 million per year, 25 percent above the 1960–65 rate. Other things being equal, this could mean a very considerable increase in the demand for construction labor; though it is probable that an increasing proportion of this rising demand will be accommodated by prefabricated houses and, possibly, by multiple unit dwellings. And, of course, as shown above, the labor force at this time will also be growing rapidly.

Arnold E. Chase of the Bureau of Labor Statistics concludes that:

> Pressure on housing demand from the physical factors appears destined to be less during the period from 1957 until 1965 than it has been during the past 7 years primarily as the result of the expected smaller increase in households but also because no further significant increase in the overall vacancy rate appears to be needed. Whether the Nation will maintain or increase the rate of new homebuilding in the years immediately ahead will depend to a large extent, therefore, upon social and economic factors.
>
> It seems likely that the new housing market will be expanded and housing standards will be improved appreciably only if ways are found to hold down construction costs and, at the same time, maintain a quality product. This would call for a concerted effort on the part of building tradesmen, homebuilders, and materials suppliers. Lower costs per dwelling unit can be achieved, of course, through construction of a larger proportion of multifamily structures. A trend toward more rental-type housing already is in evidence.
>
> Progress in cost-cutting and acceleration in homebuilding activity are imperative during the period immediately ahead, and before 1965, when a sharp upturn in household formation can be expected to strain the resources of the homebuilding industry. If efforts to expand the new-house market are successful during this interim period, industry and labor will be in a much better position to meet the greatly increased requirements for housing after 1965 (Monthly Labor Review, February 1958).

OTHER FACTORS

Earlier retirements would shrink the active labor force. Since Congress has already furnished women with a premium on retirement at 62, it seems probable that this "social gain" will be extended to men before many years elapse, and thereby tend to reduce the labor supply.

Furthermore, there has been a steady trend toward the shorter workweek, a decline to 32 hours from the "standard" 40-hour workweek, for example, would constitute a reduction in the labor supply of 20 percent, assuming no change in productivity. While such a drastic decline by 1970 or 1975 may be improbable, some decline appears likely to take place.

Whether the rapid suburban trend will continue for the period under review cannot be predetermined. There are some indications that the charm of the suburbs has lost some of its appeal. Should these indications be further reinforced, this would mean relatively fewer single-dwelling units, and a shift toward multiple-dwelling

units with some reduction in demand for on-site labor and some monetary savings in construction costs per unit.

The trends toward modular design, preassembly, and prefabrication are likely to accelerate. Building codes are making some progress toward functional standardization, rather than specifying materials and methods based on traditional practices. These trends could be greatly accelerated, if all those concerned with residential construction would dedicate themselves to the proposition that the house buyer and renter shall get better values for their money. They would reduce on-site labor requirements and thereby reduce any prospects of a shortage of labor skills.

It is also probable that the typical house of 1965 or 1970 will be different in quality, design, materials, and the built-in features, as well as the complement of articles or appliances which make up the house. This, too, makes any prediction of labor requirements and relative availability difficult or impossible. The trend toward larger families continues, but could reach a peak and reverse itself—another unknown in the housing demand.

Thus, it is obvious that the questions raised are not readily answerable. The demand for housing will be high—but how high? The supply of labor will increase. But residential construction should be expected to compete for its proper quota. If the cost of construction labor rises unduly rapidly, architects, engineers, designers, material suppliers and builders can do a great deal to offset, partially at least, the impact on unit costs by modernizing building codes, expanding the use of modular designs, of preassembled components and of prefabricated structures. Obstructions will be placed in the way of such changes, but if these changes are economically sound they will make progress, and if the occasion arises, such changes could be substantially accelerated.

Any artificial attempts to accelerate residential construction without, at the same time, recognizing that such attempts may merely raise costs could be self-defeating. While productivity in heavy construction, railroad and highway construction have increased, such increases are less evident in building construction. Indeed, Colean and Newcomb, in Stabilizing Construction:

The Record and Potential (McGraw-Hill, 1952), states:

> it now probably requires more man-years of work for the average worker to pay for the labor going into a house than it required in 1925 or 1915.

If there is evidence of any threatening scarcity of construction labor in the period ahead, such evidence should be publicized by the Bureau of the Census, other Government agencies and private agencies. This would encourage an expansion of the labor supply and efforts to minimize on-site labor utilization, as discussed above.

The Government should rely on free market forces in the fields of mortgage money, labor, materials and supplies to find answers to these questions and should avoid makeshift programs which fail to remove roadblocks or which may even be self-defeating.

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In testimony before the Joint Economic Committee, David M. Blank, of CBS, put it this way:

> However, if such a program is not undertaken or if it is not sufficiently effective, the Government must then begin to take into account the effect upon housing prices of any action it undertakes in the credit field. That is, any attempt to ease downpayments or carrying costs that successfully results in a considerably larger number of houses being built is likely to have substantial adverse effects in the form of higher prices. As a result, the gains offered to the house buyer by this easing of credit terms may be partly offset by the increased price that he will have to amortize and pay interest on over the length of the mortgage. Indeed, it is not hard to visualize a situation in which the benefits to the additional families enabled to purchase new homes are considerably more than offset by the harm done to the remaining families who would have purchased new homes in any case.
>
> At any rate, it will be necessary at times to make a conscious and perhaps unpleasant choice between an expansion in housing production, with its associated price increases, and an avoidance of increasing housing production, with its associated retardation in the rise in housing standards in this country. (Joint Economic Committee's Federal Expenditure Policy for Economic Growth and Stability, Nov. 5, 1957.)

Housing construction has been highly and needlessly unstable. Instability has its price: both workers and building materials suppliers take into account the degree of stability or instability in demand. The greater the instability, the greater the supply price, other things being equal.

Factors which unduly speed up or slow down housing construction are cost raising. Once costs of materials and, particularly, of labor are advanced, they tend to be rigid downward in periods of slack. The most important steps the Congress could take to assure adequacy of housing, adequacy of labor and reasonable costs is to let the market be the guide. Dr. Raymond J. Saulnier, Chairman of the President's Council of Economic Advisers, put it this way:

> * * * First, the housing and home financing laws of our country should be reviewed, from top to bottom, with the object of eliminating or correcting those provisions, particularly those that affect the flexibility of interest rates, that tend to impede the flow of private funds into home financing, and to cause public funds to be substituted for private credit.
>
> Second, we should avoid introducing inflexibilities and rigidities into our home financing markets by laws that require Federal purchases of mortgages at par, without regard to competitive market conditions.
>
> Third, we should never again place legal limitations on the ability of the federally insured or guaranteed mortgage to adjust itself to changing credit and capital conditions through changes in its price.

Finally, laws pertaining to direct lending by the Federal Government should be restudied to the end that credit shall not be available to qualifying users under these programs on terms that are more attractive than those prevailing for credits of a similar character in open competitive markets. * * * (The Commercial and Financial Chronicle, vol. 188, No. 5796, November 20, 1958).

[NOTE.—Mr. William J. Shickler, Building Trades Department, AFL–CIO, intended to submit a paper on this subject, but notified the staff subsequently that the paper would not be submitted. Mr. Shickler and his organization have been invited to submit such comments or data as they may consider appropriate for inclusion in the record of the public hearings which are to be held in 1959.]

THE PROVISION OF ADEQUATE RESIDENTIAL BUILDING SITES IN THE SIXTIES

RICHARD U. RATCLIFF, Professor of Land Economics, University of Wisconsin, Madison, Wis.

STATEMENT OF THE PROBLEM

The query to which this commentary is directed was presented as follows:

> What are the most critical problems to be faced in the period 1961–70 in obtaining residential building sites with necessary community facilities at prices which bear a reasonable relationship to the costs of planned improvements? How should Federal programs be supplemented or modified to help solve these problems?

The underlying assumption of the Housing Subcommittee in inaugurating the study of which this commentary is a part is that the decade of the sixties will see an accelerated urban growth which will press upon productive and financial resources. This assumption is accepted here. We are asked to consider the problems arising from the pressures on land resources and the resources required to provide urban services to the users of residential building sites.

The problem is not clearly revealed in the quoted question. There exist no criteria for determining a "reasonable relationship" between prices of prepared building sites and the cost of the houses to be built upon them. We have only the past as a guide when ratios of land value to value of house and lot have ranged from oft-quoted 20 percent in the twenties to 14 percent in the late thirties as revealed in data on FHA-insured mortgages, to 12 percent in 1950 and 14–15 percent in 1956. The problem is not to strain for some norm but rather to seek the reduction of all of those cost components in the production of building sites which, upon examination, are revealed to originate in waste and inefficiency or in monopoly profits.

The phrasing of the question in referring to "necessary" community facilities raises the issue of standards in land development. We shall assume, for purposes of this discussion, that essential facilities in an urban setting include sewer and water, paved streets, sidewalk, curb and gutter, storm sewer, schools, parks and playgrounds. Private facilities such as churches and commercial facilities for shopping are not matters for public concern save to assure that land planning provides space for them in appropriate locations. However, commuting facilities in form of thruways and mass transit call for various forms of governmental action.

To restate our problem: during the anticipated era of rapid urban expansion and the concomitant residential building boom of the sixties, what steps can be taken to provide, at the lowest cost to the consumer,

building sites with the full complement of facilities generally required for urban living?

We can now proceed to identify the cost elements in the production of residential building sites and to consider in what degree any of them may represent an unwarranted and curable burden. We can assume that all land costs, justified or not, are passed on to the home buyer.

PROBLEMS

Total land supply is ample

The sixties will see no long-run shortage of building sites. First, there is no shortage of raw land in the usual quantitative sense. Cities have grown by expansion at the periphery of the built-up area, absorbing the agricultural hinterlands into urban use. As urban needs increase, the urban land uses outbid the agricultural uses for the space. Our large cities stand as demonstrations of the growth pattern which smaller cities are to repeat. They also demonstrate the willingness of families to live at great distances from the center of the metropolitan area. Add to this demonstration the geometrical principle that the area of a circle increases as the square of the radius and we can conclude that there can be no effective quantitative shortage of potential residential sites in most of our urban concentrations. True, the increments of growth are progressively farther from the center but this fact does not appear to inhibit urban expansion.

Because of the effectively unlimited supply of land, and its scattered ownership, there can be no monopoly profits for landowners, in the long run. Residential land use is most flexible in locational specifications. It need not be at a strategic corner as in the case of commercial use; nor on a railroad as in heavy industry. Houses can be built on rolling land or flat, on hillsides or in a forest. This flexibility contributes to the competitive nature of the land market. Certainly some lands are more desirable than others by reason of convenient location or terrain. But the differences in these qualities do not result in sharp price differentials which are monopolistic in nature. Furthermore, there is nothing to be done about reducing this kind of differential for the quality differences on which they are based are the products of nature or the inevitable consequences of a geometric principle. The main point here is that there is plenty of land for urban expansion and that it will be brought into the market as fast as agricultural uses are outbid. In fact, the uneven, leap-frogging spread of residential land use has left vast interstitial areas for future development which are closer to the center than much of current new growth.

Short-run monopoly is frequent

Though there is little of the monopoly of location in the residential land market, there arises frequently a short-run monopoly based on the availability of public services, notably sewer and water. Lack of planning or financial difficulties of municipalities often result in failure to expand and extend sewer or water facilities to keep pace with demand. The result is a monopoly position for landowners in areas which are served. In lesser degree, this situation can arise as a result of failure to provide adequate school facilities. Until new sewer and water mains are extended or additional school capacity is

provided, the owners of land in areas which are served can exact a monopoly profit which is an added burden on the home buyer.

Production costs of improvements are rising

Inflationary price increases are a probability in respect to land improvement costs as they are in all other areas of the economy. Thus, this problem is not unique in the housing field. We can expect higher costs for installing sewer and water mains and the rest of the off-site improvements just as we can expect higher costs for the construction of the house. This problem is to be attacked through general anti-inflation policies of the Government rather than through special measures in the housing field.

Higher standards are common

One source of increasing costs of building sites is higher standards of space and of facilities. Basically, these higher standards stem from the demands for consumers; they are expressed in the policies and regulations of local governmental bodies and such Federal agencies as FHA and VA.

1. *Larger lots.*—Modern ranch house design demands wider frontages and modern outdoor living calls for generous backyards. The result of wider frontages is increased cost per house of street, curb and gutter, sidewalk, storm sewer, sanitary sewer, and water main. The lower density reflecting larger lot areas adds to these same costs.

2. *Higher standards for off-site improvements.*—These higher standards go beyond the bare minimums essential for urban living; they include wider residential streets, better paving, curb and gutter, storm sewers, and sidewalks. There are increasing restrictions on private wells and sewage disposal systems. The burden of higher standards bears on the home buyers but the long-run advantages appear to be generally appreciated by the consumer.

The pattern of urban expansion in inefficient

The outward thrust of our urban areas is characterized by scatter and dispersion of land development activities throughout the periphery. These activities are uncoordinated in time and place. They are often small-scale and nonprofessional. Because they are in many different political jurisdictions, they observe a variety of standards. The lack of overall regional planning produces an inefficient land use pattern and a poor fit between community needs and the supply of building sites. This uncoordinated process of land development imposes added costs on the homeowner which could be avoided if land development were orderly and compact. The dispersed pattern of peripheral settlement and its unplanned arrangement adds travel and time costs for all persons and activities which move about its area.

Much land development is small-scale

A substantial proportion of home building sites is produced through small-scale subdividing operations. The lots are sold to individuals or builders in various stages of development. The land developers include both professionals and inexperienced amateurs. The quality of the land planning is variant. This type of business activity is risky and selling costs are high. Where streets and utilities are installed and the lots are only slowly absorbed into use by reason of poor location,

poor timing or low quality of the product, the investment in off-site improvements is wasted and the entrepreneur may find that his profit and more has been absorbed in carrying costs.

REMEDIES

More efficient use of the total land supply

Though no long-run land shortage is anticipated, the total burden of the costs of public facilities can be reduced by the more efficient use of the areas already served.

1. Encouragement should be given to filling in the areas between the fingers and islands of growth before extending farther out.
2. Urban renewal activities in both central blighted areas and open land will result in more effective use of existing urban facilities.
3. Undeveloped areas, closer in than much new growth, can sometimes be brought into use by new roads, bridges, viaducts, or mass transit service.

Expansion of community facilities to keep pace with need

To forestall temporary shortages of prepared and served urban building sites, local authorities must extend public services as fast as demand dictates. A policy of requiring land developers to install streets and underground services is ineffective unless there are adequate central facilities of water supply and sewage collection and disposal. Inadequate school facilities are a further limiting factor. Thus, financial and credit aid to localities which are unable to finance the necessary extensions is indicated if monopoly prices for land are to be avoided. The Community Facilities Administration now makes loans to localities in connection with public service extensions. Federal school aids will be helpful in keeping abreast of educational needs.

Higher density for certain groups

Large lots and low population density are desirable and preferred by many families, particularly those with children. However, other families prefer less land area and seek freedom from the cares of yard work and house maintenance. Encouragement might be given to the refinement and greater use of such housing forms as the row house and the patio house for homeownership or for rent. There appears to be continuing need for more rental housing in multifamily structures. All of these housing forms are suitable for cooperative ownership. They all require less land per family than freestanding homes and contribute to greater efficiency in the utilization of public services and utilities.

Regional planning and coordination of public facilities on a metropolitan basis

So long as our metropolitan areas are split into a multitude of independent political subdivisions, home buyers will continue to bear the costs of a scattered, wasteful, and inefficient pattern and scheduling of land development and street and utility extensions through each urban region. The obvious cures are:

1. Regional planning to determine the proper distribution of land uses, to establish a master plan and a schedule for the provision of all public services, and to control the location and timing of land development.

2. Establishment of metropolitanwide agencies responsible for such public facilities as: Schools, major highways, water, sewage disposal, and storm water drainage.

By refusing to supply public facilities except in those areas where land development conforms to the master land use and utility plan and meets the prescribed schedule, growth could be made into an orderly process and costs of public facilities would be reduced.

Encouragement to large-scale vertically integrated community and building enterprises

The integration of land development and homebuilding as practiced by large tract developers in the larger cities results in production economies and better land planning. This scheme of house production reduces the costs of developed land by the greater efficiency of large-scale processes, by the lesser risk compared to the hazard of the independent subdivider who must sell off the lots before taxes and holding costs ruin him, by eliminating sales expense, and by the smaller profit margin on land in the calculations of the tract developer who takes his profit on both land and house in an undifferentiated margin when the house is sold. The large operator typically includes the full complement of community facilities with the finished product, even building schools in some cases. Each home buyer bears his proportionate share of the costs of such facilities as it is included in the price of the home and financed by the mortgage credit used in the purchase.

FEDERAL INTERVENTION

1. Following the pattern of the "workable program" requirement under the urban renewal program, there might be set up a regional master plan prerequisite for Federal aid. Such a plan would include a general scheme of land utilization in the metropolitan area, the street and highway skeleton, and the utility and drainage plan. It might also include the plan for an expanded school system.

2. Federal financial assistance should be provided for the preparation of the regional master plan. State legislation will be necessary in many States to authorize the establishment of regional planning bodies.

3. Following the pattern of the college loan program, the Federal Government should stand ready to provide loans to local governments for the extension of public facilities but only in areas where there is an acceptable regional master plan.

The Community Facilities Administration, if continued, should restrict its advances for planning for public facilities to areas covered by a regional master plan. It would be logical to combine the loans for utility planning and for installation in one program.

4. The Federal Housing Administration might be authorized to extend insurance coverage to private loans to land developers for the purpose of installing small and temporary water and sewage disposal systems in locations not to be served by public systems within a reasonable time. This program should be limited to areas covered by a regional master plan.

5. As a matter of administrative policy FHA might refuse to approve properties for mortgage insurance where they are not served with essential public facilities or are not in an area covered by a regional master plan.

6. Federal aid for roads and highways serving peripheral areas and for the improvement and extension of mass transportation will assist in adding to the effective supply of land for urban expansion.

CRITICAL PROBLEMS TO BE FACED IN OBTAINING RESIDENTIAL BUILDING SITES, 1961–70

MAX WEHRLY, Executive Director, Urban Land Institute, Washington, D. C.

The following memorandum is submitted in response to this question:

> What are the most critical problems to be faced in the period 1961–70 in obtaining residential building sites with necessary community facilities at prices which bear a reasonable relationship to the costs of planned improvements? How should Federal programs be supplemented or modified to help solve these problems?

Such a memorandum to be exhaustive and complete would require the most detailed kind of study and objective judgment to arrive at satisfactory answers. This is obviously beyond the scope of your present request, as I understand it. However, if any comments from me on the subject at this time will be helpful, I am only too happy to make them, even though some of them may appear obvious.

Three major causes lie at the bottom of our land and building site problem, as I see it. The first is the unprecedented growth of population in the United States which was sparked by World War II and sustained during the subsequent 12-year period by high economic activity and general world conditions.

The second cause is the urban growth phenomenon whereby the bulk of this population increase has gravitated to the urban areas, and particularly to the larger industrialized metropolitan complexes of the eastern seaboard, Great Lakes, and west coast areas. This, of course, does not ignore the high rapidity of urbanization in the metropolitan areas of the Southeast and the Southwest.

The third factor is that space for the absorption of this urban influx was to be found in adequate amounts only at the fringes of already urban and urbanized areas, usually where few, if any, urban utilities and facilities were located, and for the most part outside the corporate limits of the ceneral cities in rural and semirural jurisdictions ill prepared financially or governmentally to cope with rapid urban growth. Increasing use of the automobile as a means of transportation has further aggravated the land and facilities problem by permitting a much looser scatteration of population than had been possible in the past.

The problem then has been generated by three elements: high birthrate and family formation, concentration of population in metropolitan areas, and the rate of speed with which these phenomena have occurred.

How do the happenings just recited affect the problems of obtaining residential building sites? During the past decade or so we have been

appropriating land for urban purposes at a rate of well over a million acres per year. While some of this land has been overdeveloped, much of it has been inefficiently, or only partially, utilized, a "filling in" process in the latter areas inevitably occurs. Robinson Newcomb, in an analysis of population growth and resulting land requirements, states that the net demand for housing may not grow in the next decade as much as it has grown in the past decade.[1] He bases this statement on the decreasing trend in family and household formations, a similar trend in the number of households between the ages of 30 and 45, the increasing number of older households between the ages of 55 and over, and the increasing trend toward the permanent use of such housing accommodations as the "mobile home." He concludes that our demand for raw land during the next decade may be reduced 20 to 30 percent below the levels required in the one just past.

Be that as it may, we still have not solved the problems created during the forties and fifties, and we have given almost no consideration to the appropriateness of the land being used for residential development in terms of its highest and best use for other purposes; i. e., food production, for example. Decisions have been based largely on the expediency of the moment rather than long-term implications.

Thus, faced with the demand for housing accommodations, developers have been forced to pay ever increasing premiums for raw land. Faced with mounting financial pressures and the preemption of tax moneys by State and Federal Governments, municipalities have been requiring the developer to assume more and more of the costs of commodity facilities, many of which heretofore had been considered solely as a municipal responsibility. Finding this not too difficult during the period of high market demand, municipalities have been increasing their requirements and specifications without assuming any of the financial burden of development directly. Caught between the increasing costs of manufacturing home sites and the market, the developer has had to get his profit out of the house and trade dollars on his developed site.[2]

This condition has to my mind been a major cause in our dilemma of producing building sites. It is compounded by the fact that the FHA and other lending and insuring agencies have never recognized in their valuations the increasing costs of land and land development, including in many cases the required dedication of park, school, and other public uses; installation of oversized utilities, central water supply systems and sewage disposal plants. These are all costs which, if required from the developer, must be necessarily reflected in the final cost of the project. Lending agencies, by and large, have been preoccupied primarily with the housing accommodation per se. This condition has in many instances resulted in inferior site planning, inefficient land use, "site jumping" to get beyond local regulations, scattered isolated, and spotty developments and other undesirable forms, without the amenities of schools, recreation space, shopping, and other facilities which are essential to modern integrated community development. Federal policy with regard to capital gains and related tax considerations have also been a factor.

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[1] "Are Urban Land Pressures Easing?" Urban Land, May 1958.
[2] Tech. Bulls. 27 and 32, Urban Land Institute.

How can this situation be remedied, or at least alleviated? A partial solution would be for the communities throughout the country to take a more realistic view regarding their requirements and to develop a better understanding of the economics of producing residential building sites from raw land. This should also include a better realization on their part of what constitutes their community obligations in terms of furnishing utilities and facilities.

The most important approach it seems to me, from the standpoint of Federal programs, would be to permit within the present lending and insuring structure at least the same recognition of all of the costs that may go into the "manufacture" of a building site as has been extended to the house itself. The developer is faced with widely different sets of physical variables in different tracts of land he may be developing, and different physical conditions within the same tract. Unless he can "average out" these variables, which directly affect costs, he is in a difficult position economically. This condition has been the major stumbling block to the developer whose principal interest is in producing building sites as contrasted with the building of structures thereon. If we can make it as attractive for a land developer to produce building sites in quantity with all of the necessary amenities which can be "wholesaled" to builders for the construction of houses, apartments, and so forth; we will, to my mind, greatly improve the technique of home building and create a climate wherein much more adequate and satisfactory integrated community development can take place than has been the case heretofore.

Every encouragement should also be given to the smaller developers to pool their resources in order to produce complete and integrated neighborhoods rather than the scatteration which is so prevalent. Because of the financial problems they have had to face, we have at present only a minute number of land developers who have the financial resources or backing—or who can obtain them—to manufacture the kind of developments that they and the public at large are seeking.

I feel that any Federal program which will integrate into its insuring and lending policy a fuller recognition of the variable costs involved in the development of land will go a long way in helping to solve the adequate production of building sites to accommodate the surge of population expected to be produced in the middle and late sixties by the babies of World War II.

In this process I think we should not overlook the possibility of a trend toward multifamily living in close-in areas, which can be brought about through urban renewal and may be a significant factor in view of our increasing percentage of older age groups, as well as the newly formed households of the younger group.

FARM HOUSING

E. V. SMITH, Dean, School of Agriculture and Director, Agricultural Experiment Station, Alabama Polytechnic Institute, Auburn, Ala.

Because of the large number of substandard farm homes in our Southeastern States, our institution has long been interested in the problem and in means of alleviating it.

Our function is research on agricultural and related problems. As a consequence, my answers to the questions raised may be more delimited and I may feel a greater reticence to express my personal opinion than might be the case if I were answering solely on the basis of my interest in the problem of inadequate farm housing.

Now, I shall address myself to the questions which read as follows:

> What should be done to increase the supply of standard shelter for underhoused farm families?
>
> What should be done to provide a source of housing credit adequate to meet the needs of farm families who are potential purchasers or renters of privately owned standard housing but whose incomes are not high enough to permit their participation in existing markets for such housing?

We could answer both of these questions more positively if we knew more about the causes of substandard housing. Many people have simply pointed to low farm income and said that little can be done to improve farm housing until the farm income situation is improved. Others have pointed to the fact that the farm home and the farmstead are considered as an entity to a far greater extent than are the home and business in any other segment of our economy; as a consequence, the farm home seems to be less competitive for funds needed for home improvement.

Our own experience has suggested that skilled building artisans are not as available to many rural home builders as to the average urban dweller. This has raised such questions as to whether or not plans and specifications are available that are adapted to the needs of rural residents and as to whether they could be simplified to the point that they could be more readily interpreted by available artisans in rural areas. The question has also been raised as to whether codes designed for urban development are applicable to rural conditions. Finally, the question is frequently raised as to whether lending institutions, whose experience lies largely in the field of urban development, have the interest, the experience, and the authorization to finance farm construction.

Most of these questions and observations are speculative in nature. An expanded research program could do much to provide more positive answers to the questions as propounded.

Agricultural research agencies, both State and Federal, are interested in the problems of farm housing. The funds available for

the support of research in this area, however, are inadequate to provide the backlog of needed information as quickly as we might desire.

Among the first new projects undertaken by the State experiment stations, with USDA cooperation, after the passage of the Research and Marketing Act of 1946, were surveys dealing with the physical status of rural housing and the homemaker's ideas as to the space, arrangement, and utilities that she would want in a new or renovated home. A cooperative regional study was conducted in each of the four regions of the country by home economists of the State experiment stations, with the cooperation of the Bureau of Human Nutrition and Home Economics.

The results of these studies were published as regional bulletins. A copy of Southern Cooperative Series Bulletin No. 14, from the southern region, is appended as exhibit A. These studies gave a good indication of the status of rural houses during the late 1940's and early 1950's. The predictive value of the studies were limited by the probability that they were an expression of the homemaker's experience rather than of her proven need. These studies did not strike at the heart of how needed improvements could be financed nor at the adequacy or inadequacy of credit.

The next phase of the rural housing study was also cooperative and regional in nature. Engineers and home economists, and in some instances architects, cooperated in physical research. Space requirements and arrangements for various activity areas, simplified construction methods, and use of native materials were among the factors studied. The inadequacy of funds available became acute when physical research was undertaken.

An example of the results of one phase of the cooperative physical research is recorded in Progress Report No. 66 of the API Agricultural Experiment Station entitled "Design for a Low-Cost Farm House." A copy of this report is attached as exhibit B.

The last paragraph of the exhibit raises such questions, indirectly, as to whether the same codes and structure requirements need be applicable to rural and urban construction. The research report does not attempt to answer the questions; neither does it investigate the type nor availability of credit after having proposed a low cost design.

As I have read the record, it has seemed to me that members of the housing subcommittees of the Senate and House have felt that the housing acts have not provided the same opportunity and incentive for rural home construction and improvement as for urban dwellings. It has seemed that they have felt that rural people have not been given the same opportunity to improve their living conditions as have their city cousins, irrespective of whether the latter have borrowed to build sumptuous single family units or have moved into low-cost, rental multiple units.

Consequently, section 603 of the Housing Act of 1957 made a small appropriation to the Housing and Home Finance Agency and authorized the agency to make grants to the State experiment stations for farm housing research. Recognizing the inadequacy of our knowledge concerning limitations that credit facilities and credit institutional organization may place on farm housing improvement, an advisory committee recommended that the agency use the appropriation for support of research in the general area.

A national committee of agricultural economists, represnting the four regions of the country, considered the need and developed a research proposal. Since the funds available to support the research were inadequate for a national project, it was recommended that an intensive study be undertaken in the region of greatest need with pilot studies in two other regions. It was agreed that the Southeast had the poorest rural housing as a general rule; consequently, the agricultural experiment station of the Alabama Polytechnic Institute was assigned the major study with associated pilot studies being undertaken by the experiment stations of the University of Illinois and Colorado State University.

This research will be undertaken in three phases. In the first phase, a study of the housing of rural residents will be made in an effort to determine (*a*) current condition of housing for various income groups, family sizes, etc., (*b*) needs for housing, (*c*) attitudes toward making needed improvements, (*d*) attitudes toward and ability to use credit to make needed improvements and (*e*) extent to which lack of credit facilities is preventing needed improvements from being made.

The second phase will deal with lending agencies that operate in the field of rural housing financing. This study will include (*a*) an evaluation of credit facilities for rural housing, (*b*) extent to which rural people are using available credit, (*c*) legal and other restrictions on credit for farm housing, and (*d*) attitude and ability of lending institutions to meet credit needs.

The third phase will consist of an evaluation of the results obtained in the first two phases which will be reported to the Housing and Home Finance Agency. This report, which will be completed by June 30, 1960, is expected to form the basis for a recommendation to the Congress by that agency.

When the study is complete, we should have a better basis for answering the questions:

> What should be done to increase the supply of standard shelter for underhoused farm families?
>
> What should be done to provide a source of housing credit adequate to meet the needs of farm families who are potential purchasers or renters of privately owned standard housing but whose incomes are not high enough to permit their participation in existing markets for such housing?

Even then, we should recognize certain limitations in the results. The credit study will apply in detail to the problems of one geographic region, the southeastern cotton and tobacco area, with control study results for the corn area of the Midwest and the wheat region of the West. Furthermore, the study would have been more meaningful if a concurrently expanded program of physical research could have been undertaken.

In the meantime, thousands of farm families are living in substandard houses. As the Congress could not wait for completed research on city planning nor for all city folks to reach the state of economic affluence where all could own homes before providing for urban renewal, perhaps the Congress cannot wait for the results of the abovementioned research before offering a broadened plan for financing improvements in rural housing.

SUPPLY OF DWELLINGS FOR UNDERHOUSED FARM FAMILIES

Department of Agriculture

The following is submitted in response to the question:

> What should be done to increase the supply of standard dwellings for underhoused farm families?

This raises the further question of whether the term "farm families" encompasses all families living in rural areas or whether it excludes those persons living in what are generally recognized as rural residences.

Various definitions of what constitutes a farm have been developed from time to time for various purposes. Title V of the Housing Act of 1949, for example, defines a farm as one or more tracts of land in agricultural production which will produce at least $400 worth of farm commodities for sale and home use, based on 1944 prices. The general concept of "farm families" as those who do at least a minimum amount of farming is one that in practice has been found to be workable. This discussion will be based on the concept embodied in the Housing Act of 1949; therefore, those families who merely want to live in the country without actually farming are not within the scope of this statement.

An analysis of the reasons why some farm families are underhoused would reveal a variety of causes but most significant, probably, would be the lack of sufficient income, savings or credit to finance improved housing. This situation, in turn, might be caused by a number of related factors such as inadequate income of the farm family, either from farm or nonfarm sources; competition for use of net income with the result that it is used primarily for reinvestment in the farming business; or more stringent loan requirements if the funds are to be used for home construction or improvement.

The question of how to beset use net income is particularly acute with families with moderate income, especially if they are endeavoring to expand the size of their farm business. Income-producing investments usually have first claim on a farmer's net income. In fact, for a beginning farm family to set aside a substantial portion of its net income for housing may involve jeopardizing the farming business.

Poor housing in rural areas is as much a burden on the family and the community as poor housing in cities. Because the inadequate houses on farms are scattered over the countryside, the need for better housing is less conspicuous than the slums in our urban centers. The families living in these comparatively isolated homes on farms are just as uncomfortable and suffer the same hardships as those living in inadequate shelter in urban centers.

As poor housing environments differ in the cities from those on farms, the solutions to the problems also differ. The farmhouse is not

an entity in itself, but an integral part of the farm business. The farm business, in turn, provides at least part of the income the family has to spend on housing and provides the security for a loan for home construction or improvement if the farm already is not too heavily mortgaged.

In a city, the place where a man lives generally is separate and apart from his place of business or employment. He does not need to mortgage his means of making his living to obtain a loan to build or improve his home, whereas a farm family must do that. Some farm families are reluctant to borrow to improve their housing for fear of losing their farm and source of income. If a person living in a city wants a different home, he shops for it. A farmer, however, because his home is fixed on his farm, must shop for a plan rather than a completed house.

Substandard farm housing generally is a symptom of low income. Approaches to the problem of increasing the supply of standard shelter for underhoused farm families must be directed not only toward improving the home itself but also toward increasing the income level of the farm family to the point where it can afford better housing, either on the farm or elsewhere.

To increase the family's income so that it can afford better housing frequently requires the enlargement of the farm or development of the farm business; or, in some cases, the acquisition of a new farm. Those, both in and out of the Government, who advise farm families on improving their housing should have available not only the latest results of farm-management research but also should encourage farm families to thoroughly analyze their business operations. In many areas where shortage of income is the reason why the family is living in substandard housing, this shortage of income frequently can be compensated for by off-farm employment.

Research, education, and credit, the usually suggested approaches to problems associated with inadequate housing, are still basic. Each, however, should be reexamined with a view to including in its scope, appraisals of the problem of inadequately housed farm families.

Continued research in the technical aspects of designing and construction is needed, including not only the adaptation of technological progress in homebuilding to the home itself, but also to farm service buildings. The conversion of thousands of obsolete dairy barns to present-day systems of dairying is an example of a real challenge to our State colleges, building-material manufacturers and suppliers, and the Department of Agriculture. The further development of functional and flexible farm service buildings that can readily be converted to meet the changing needs of our agriculture and enable the farm family to utilize its labor and land resources profitably to realize sufficient income to pay for better housing would be helpful in many instances.

Other fields that need further investigation include research in the use of new building materials, standardization of design and dimensions of building material and home equipment, practical methods of remodeling old farm houses, investment experiences of lenders who have been active in the farm-building field and lending practices, including fund control and supervision, designed to assure that lneders who advance funds will obtain adequate security for their loans.

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Conveying the practical results of research to farm families, lenders, building material suppliers, and others is an educational challenge to both industry and Government. The improved communications today—radio, television, newspapers, magazines—all are widespread mediums for bringing to farm families the results of private and governmental research. To be most effective with farm families now living in substandard housing, technical advice needs to be available on an individual case basis. The building industry has made marked progress in furnishing this type of service to farm families. Additional service is needed, however, particularly in connection with the repair and modernization of farm homes and service buildings.

To improve, remodel, repair or construct a farm home requires money. From the standpoint of the farmer, this means income, savings or credit. Those farmers who, if they need to borrow, can qualify for credit from conventional sources, generally do not have major budget problems. The real problem, however, is faced by the family who wants to improve its home but is without sufficient income or assets to qualify for a loan from conventional sources.

The Department of Agriculture has had extensive experience in extending financial assistance to farm families to improve their housing. Under title V of the Housing Act of 1949, approximately 30,000 loans, totaling $170 million have been made. Three-fourths of this money went for farm homes. In addition, under title I of the Bankhead-Jones Farm Tenant Act, as amended, this Department has made almost 85,000 loans and, of these, 78,000 included new dwellings or the improvement of existing dwellings. All of these loans were made to persons who could not finance their homes with loans from private or cooperative sources.

The Government's activity in providing farm housing credit extends beyond providing opportunities to those families who cannot qualify for credit from other sources to obtain loans for housing purposes. The demonstration in farm housing financing now being carried on by the Department is based on loan making techniques of planning, inspections, and fund controls which reduce the risk during the construction period and suggests methods that private and cooperative lenders could adopt to safely expand their lending activities for farm housing purposes.

B. Financing

FINANCING THE HOUSING MARKET OF THE SIXTIES [1]

DR. DAVID L. GROVE, Economist, Bank of America National Trust and Savings Association, San Francisco, Calif.

This paper is submitted with reference to the following questions:

> What was the dollar volume of capital funds potentially available for mortgage credit on new residential construction in each of the years 1948–57? How much of this potential amount was actually so used in each year? What factors account for the percentage variation from year to year? To what extent should this percentage be increased during the period 1961–70?
>
> What are the prospects for increasing the pool of credit available for new residential construction during the period 1961–1970?

Despite the observation of some suspicious observers that 1958 is the 13th year of the postwar housing boom, we find this recession-scarred year boasting some $17.5 billion in residential construction—a mark bettered only by 1955 and 1956, even in constant dollar terms. We find, too, the nearly universal feeling that more is yet to come, as the postwar baby boom begins to be translated, by 1965, into a tremendous marriage boom, and concurrently into a heavy demand for housing and all the accompanying appliances.

In recent years, however, some questions have arisen concerning the long-continued housing boom—not, of course, about the capacity of the economy to house the American people, but rather about its ability to do so at reasonable prices and its ability to supply the savings needed for the financing of home buyers. Housing prices, for instance, have risen over the past decade about twice as fast as the prices of other items. Ignoring for the moment the problem of rising building costs and prices, which is more directly a function of the technology of the industry, let us consider the recent trend in the financing of this industry.

No very accurate estimate can be made of the funds which have been available for mortgage credit on new construction in the period 1948–57 for the reason that capital funds can be shifted from one use to another with some ease, depending on the relative attractiveness of the alternatives. Moreover, it must be recognized that there is no clear distinction between funds available for new construction and those available for financing existing units. Even though the focus here is on money available for new construction, it is almost futile to try to analyze this as a thing apart.

[1] The views expressed in this paper are the personal views of the author and should not be regarded as reflecting those of the institution with which he is associated.

It is customary to define the credit pool available for mortgage financing in terms of the funds at the disposal of the major institutional mortgage lenders. This seems to be the best working definition, even though it ignores certain private and Government lenders whose importance in the total currently is small, and even though it takes no note of the possibility that funds held elsewhere can be diverted to mortgages. The possibility of shifting funds is especially important. If there should develop a sufficiently compelling demand for mortgage funds so that mortgage interest rates rose relative to other rates, this would be expected not only to induce the traditional lenders to increase the share of their funds allocated to mortgages but also to permit them to compete more effectively in attracting loanable funds; in addition, it would invite the entry of other sources of funds into the mortgage market.

As an approximation, however, let the pool of credit available for residential financing *be defined to include individual savings in the form of life-insurance reserves and savings accounts at savings associations, commercial banks, mutual savings banks, and credit unions.* On this basis, it appears that the total has increased by 80 percent over the past decade (see table 86, p. 188). The annual additions to this pool have varied throughout the decade, ranging between 2.7 and 5.3 percent of personal disposable income. The postwar restocking boom, the Korean buying spree, and then the 1955 consumer boom, all tended to depress the ratio of savings, but in the other years of the decade impressive increases in savings were recorded.

In contrast to the 80-percent rise in the available supply of funds (as defined above), mortgage debt on nonfarm residential properties more than trebled in the years 1948–57. In consequence, the ratio of mortgage debt to the mortgage credit pool climbed from roughly one third to over one half—and thereby approached the peak of 0.62 reached in the late 1920's, when portfolios apparently were saturated with mortgages (see table 86, p. 188). For some of the years in the period 1948–57, the rise in mortgage debt exceeded the additions to the pool of available funds, indicating that some funds had to be shifted from other uses in order to supply the mortgage demand. For the entire period, growth in mortgage debt amounted to 81 percent of total additions to the pool of credit, but in the last 5 years of the period it averaged only 74 percent, in contrast to the very high 93 percent share for the first 5 years. Clearly, this phenomenon of a faster rate of growth of mortgage debt than of available funds cannot continue indefinitely into the future; to do so would create intolerably unbalanced portfolios and, in any event, the expansion eventually would reach an absolute limit by exhausting the pool of funds.

Several factors in addition to the large number of units being financed have combined to increase the demand for mortgage debt. For one thing, there has been a vast increase in demand for mortgage funds resulting from the historical decline in downpayment requirements; prior to World War I, equity funds constituted about one half of the funds used for new residential construction, but by recent years this proportion had fallen to one quarter. In addition, the lengthening of mortgage repayment periods has added to the volume of outstandings. Whereas loans of 10 years or less were the norm during the 1920's, conventional mortgages as long as 20 years now are

common, while the average term of FHA mortgages made on new houses during 1956 was over 25 years. The average loan amount also has risen sharply in the postwar period in consequence of lower equities and much higher selling prices. In the 2-year span, 1954–56, the median selling price of new houses jumped 18 percent, while, until 1955, ever lower downpayments were the rule. The net result of all of these factors is that a given volume of funds committed to mortgages will now finance fewer home purchases over a given period of time.

While the foregoing explains the vast increase in demand for mortgage money, the share of the pool which is invested in mortgages, and to some extent the size of the pool as well, has been influenced by the availability and attractiveness of other outlets for investment funds. During 1954 and 1958, for instance, other demands for funds were relatively low, and savings institutions actively sought out mortgage investments. During 1956 and 1957, however, the heavy demand from other sectors allowed institutions to be more selective about investments and caused them to turn away from relatively illiquid and relatively low-yielding residential mortgages. The flow of funds from the credit pool into residential financing also reflects to some extent the changing pattern of distribution of savings among the various savings institutions. For instance, the growth of savings at savings and loan associations amounted to only about about one-third of the flow of savings to life insurance companies at the beginning of the decade, but overtook it by the end of the period—an important shift, since almost all savings and loan funds go into mortgages, while roughly only one-third of life insurance funds currently are invested in that field.

We have encountered, then, a situation in which there has been a vastly greater rate of increase in the demand for mortgage funds than in the overall pool of investment funds "available" for mortgages, reflecting a higher volume of housing starts, higher prices, the sharp rise in the average amounts of new loans, and also the slower repayment of such loans. Consequently, a legitimate question arises concerning the possibility that shortages of mortgage funds might cause a setback to the housing industry should such a situation continue into the second decade of the postwar housing boom. In attempting to answer the question here, we will investigate the "prospects for increasing the pool of credit available" for mortgages in the coming period. The demand for mortgage financing, however, will affect not only the share of the available pool of funds used for mortgages but the very size of the pool itself. Therefore, we must evaluate a key element in the need for financing; that is, the expected future demand for new housing.

An analysis of the housing market naturally begins with an analysis of the number of households. Households are constantly being formed and extinguished, but it is the net change in their numbers ("net household formations") which is relevant to the demand for new dwelling units.

There are two major forces affecting the number of households: (1) Demographic factors (the number and age distribution of the population), which directly affect the number of persons coming of marriageable age, the death rate, and the number of people in the

age groups from which households are customarily formed, and (2) the level of real income, which affects the marriage age and the extent to which young and old may live apart.

The importance of the number of persons in the household-formation age group is too obvious to deserve comment. In many respects, however, income is just as crucial; high income stimulates migration, it encourages marriage, and it promotes undoubling by making it possible for many "marginal" individuals and families to maintain separate households. Thus, the sustained period of high income which the nation has enjoyed since World War II has been responsible for wiping out a backlog of deferred marriages, for lowering the marriage age, and for increasing the number of so-called "nonnormal" households, which in the recent past have comprised 40 to 50 percent of net household formations. Because these sources have been tapped during the postwar period, continued high income is not likely to accelerate the present rate of houehold formation, but a sharp drop in income could reduce the rate through marriage deferrals and could cause many "nonnormal" households to disappear through redoubling.

The number of households may be affected by a host of other factors, including the relative prices of housing and other goods, changes in taste, credit availability, and the public's asset position. However, in most cases these effects are remote; such factors, in other words, bear more directly on the quality of accommodation demanded than on the decision to seek separate quarters. In fact, these factors also appear to be secondary in importance to income in regard to the quality of units—their space, condition, style, and convenience. For instance, average value per unit may be expected to rise as real income rises, giving income a significance for mortgage lending apart from its effect on the number of households. We should remember, however, that this increase is not proportional; as a person's real income rises, the share which he spends on housing tends to decline.

We have seen that the number of net household formations determines the total change in demand for dwelling units. However, the number of newly constructed units may differ from net household formations. The market can adjust to a change in the number of households through the expansion or absorption of vacancies, the number of demolitions, and the creation of additional units through conversion of existing houses, as well as through new construction. The amount of new building required can be expressed as equal to the net increase in households, plus net change in vacancies, plus demolitions, less net conversions.

Demolitions are affected by a host of factors—many of them being noneconomic in nature, such as the effect of urban renewal and highway building programs. Conversions are to some extent a substitute for new starts. They were particularly important during the depression, war, and immediate postwar years when new construction was down, either because of depressed demand or because materials were in short supply. These conditions are not likely to be duplicated in the foreseeable future. Hence we can concentrate on the influence of new construction and changes in vacancy rates on the total demand for housing.

Construction of new dwelling units may take place in the face of rising vacancies but, if it is to exceed household formations, it can do

so only because new houses are preferred to vacant existing units. There are several apparent reasons for this preference for new construction. One factor is comparative terms. In recent years permissible downpayments and length of amortization period have been more stringent on older houses, and thus it has been easier to gain access to new housing. A second factor is comparative price. In the seller's market of the postwar period, used house prices often have failed to reflect the age of the structure, giving rise to a preference for new construction. A third factor is the change in the public's taste for housing. This too has favored new construction, since a shift apparently has occurred in favor of new suburban single-family dwellings as against older urban multiunit dwellings.

In attempting to apply all these considerations to the housing market of the 1960's, we are forced to break the decade into 2 parts because of the differential impact of household formations in the 2 halves of the decade. Certainly the rise in this key figure, from an annual rate of 800,000 in the early part of the decade to over 1 million in the latter part, indicates a strong rise in housing demand from the first to the second of these subperiods. Housing demand in the first half of the 1960's, as during the current doldrums in household formations, will depend to a great extent on demolitions, migration (off the farm, out of the city, and toward California), upgrading resulting from improvements in income prospects, and (hopefully) greater stabilization of housing costs. During the late 1960's, however, we can expect demand to be spurred by the jump in new households.

In the light of all these factors, it is quite likely that the first half of the decade will generate an average annual demand of 1.2 million nonfarm starts, and the late 1960's an average demand of 1.4 million starts. Assuming a continuation of the upgrading phenomenon seen throughout the postwar era, we can expect new housing demand to average roughly $21 billion in the first half of the decade and roughly $26 billion in the second half of the decade, as compared with $17.5 billion in 1958. The demand may be cut short, of course, if the costs of land, site development, and construction continue to rise far faster than increases in income. The result in that contingency would be a shift toward rental housing construction and also toward a different type of financing situation.

Assuming, however, that housing costs can be kept within bounds, and that demand of the magnitude indicated will develop, we must now ask whether there will be a "pool of credit available for new residential construction" of comparable magnitude. Actually, two questions must be answered: (1) How much will be available in the total pool of savings? and (2) how much will be channeled into new residential mortgages? To simplify the discussion, we will assume that average maturities and percentage downpayments will not change much, if at all, during the period, and that the ratio of increase in mortgage debt to the value of new residential construction is unchanged.

First, let us consider the basic source of mortgage funds; that is, personal savings. By definition, these savings are the difference between the disposable personal income (i. e., personal income after income-tax payments) of the more than 50 million spending units in our economy, and the amount spent by those families and individuals for

goods and services. Financial institutions exist to mobilize the savings of those millions of consumers, whose savings individually fluctuate widely, in line with shifts in the owner's fortunes and desires. Such institutions are able to impart a measure of stability to the flow of savings by taking advantage of the fact that consumers as a whole behave in a more stable fashion than they do as individuals.

However, we must remember that total savings register wide fluctuations also. Savings—except for debt repayments and other contractual savings—are largely a residual and are thus dependent on the many factors that govern spending decisions. The general health of the economy, manifested especially in the level of employment and wages, determines the level of income, while this factor and others besides—notably the desire to maintain a certain standard of living through thick and thin—determine the level of consumer spending. The bulk of savings is the unplanned result of these diverse pressures. Consequently, we see consumers saving at very much different rates at different points of the business cycle, depite a general tendency to save between 4 and 8 percent of income. For instance, savings amounted to 25 percent of disposable income in 1943 and 1945, when consumers would not or could not spend all of their vastly inflated incomes; in contrast, in the depression years 1932–33, consumers actually spent more than they earned, in an effort to maintain customary living standards.

Despite cyclical instability in total personal savings, we have seen long-term stability in the average savings-income ratio, notwithstanding many changes in the Nation's economic structure, financial organization, and socioeconomic attitudes. This fact suggests that the actual volume of savings will grow apace with the economy in the coming decade, and the fact of smaller fluctations in postwar business cycles suggests that savings will flow relatively evenly into the pool of credit available for residential construction. Thus, the future size of the pool of credit available for residential mortgages is *largely* a function of the growth of GNP.

True enough, changes could be instituted (in tax laws, for example) which might favor increased saving, thereby increasing the size of the pool within a given size of aggregate income. Also, legal changes and Government pressure might be brought into play to shift capital funds into the pool from which mortgage credit is drawn, or the Government could provide funds directly. On the assumption that no such changes are contemplated and that the market is to be allowed to play its role as an allocator of resources, the size of the pool will depend on the growth of income and on the ability of the institutions providing mortgage credit to compete with others for funds. I believe that such institutions should be able to attract the necessary funds, and, if mortgages provide a satisfactory investment outlet, theses instituitions will employ a large enough share of their funds for this purpose to meet the forecasted demand. This matching of the supply and the forecasted demand for mortgage funds is not likely to be achieved, however, without greater flexibility of mortgage interest rates, easing of restrictions on some types of lenders, and the entry of new sources of funds.

If the growth of GNP (in 1958 dollars) comes up to expectations, reaching a figure of about $575 billion by 1965 and $675 billion by

1970, and if the ratio of personal savings to disposable personal income averages around 7 percent, the total "pool" of credit available for mortgage lending, *by the definition established earlier in this paper*, should be about $352 billion in 1965 and $457 billion by 1970. This would indicate an increase of $193 billion for the 1960–70 period.

Total new residential construction for the same period is estimated at roughly $235 billion. Of course not all of the new construction must be financed by additions to the pool, for payoffs on existing mortgages will provide funds for new loans. During the years 1948–57, growth in the amount of residential mortgage debt was only 60 percent of the value of new construction in the same years. This period witnessed much of the extension of amortization periods and the reduction of downpayments previously referred to. Since these special factors are unlikely to provide the same impetus to the demand for mortgage funds in the future, it seems unlikely that the ratio of increase in mortgage debt to the value of new construction will rise further, and there is some hope that it may fall. Using 60 percent of the value of new construction as a rough estimate of the demand for added mortgage funds yields a figure of $141 billion of additional mortgage funds needed for the years 1960–70.

Thus, while the expected increase in the size of the "pool" of savings available for residential mortgages will more than match the increased demand, the margin appears uncomfortably thin. If the full volume of mortgage funds implied by the estimate for new construction is to be met, mortgages must claim about 73 percent of the increase in the "pool of funds available" for this purpose. The result will be an unprecedentedly high share (nearly 65 percent) of the total pool of funds invested in mortgages.

An escape from this impasse can be provided if funds not now considered part of the pool are made available. One possible source which suggests itself is the growing volume of reserves held by private pension plans. These reserves could easily increase by as much as $30 billion, in 1960–70, as the plans spread and their benefit levels are raised. If a significant share of this money is invested in mortgages, it will go far to ease the pressure for mortgage funds. The addition of $30 billion of pension reserves to the mortgage credit pool, with all other factors constant, would mean that only 63 percent of total additions to the credit pool would be required to finance anticipated new construction, and the ratio of total mortgage debt to the size of the pool could be held under 60 percent. Whether these reserves will be made part of the pool of credit available for mortgage lending depends upon the relative attractiveness of other alternatives.

Let us turn then to the factors which influence the allocation of savings between mortgages and other alternative uses for funds, such as the securities of corporations and governmental agencies. For example, what forces last year determined that mortgage debt would rise by $10 billion, while long-term corporate debt was rising by $9 billion and total public debt was increasing $3 billion? Obviously, the allocation of funds among these alternative uses of savings depends to a certain extent upon the capital demands of industry and Government—just as it depends upon the underlying demand for mortgage funds—but other factors, namely monetary policy and the institutional structure of the mortgage market, also influence the direction of flow of savings into investments.

The allocation of funds is strongly dependent on comparative interest rates, since investors seek investments yielding the most attractive return when confronted with outlets of reasonably comparable quality. This would help account for the postwar shift of funds from Government securities into mortgages, and also for the 1956–57 shift of funds away from the Government-supported end of the housing market. The relative liquidity of assets is another consideration, although this is more important for commercial banks than for some other investors. The degree of risk also plays an important role; since every credit institution maintains some sort of criterion with respect to the maximum acceptable ratio of its risk assets to its capital funds, there is a limit to its acquisition of debt instruments other than Government securities or Government-guaranteed mortgages. Finally, traditional or legal ratios in the composition of assets also affect the investment policies of institutions, especially when such proportions are prescribed by law.

The general controls wielded by the Federal Reserve System—open market operations, changes in reserve requirements and alteration of the discount rate—may affect the allocation of funds among alternative uses because of the differences in the relative sensitivity of such alternative uses to changes in money rates and in the availability of credit. The mortgage lending requirements applied by lenders are affected by monetary policy as well as by Government regulations. These requirements govern downpayments, amortization periods, and the financial qualifications of loan applicants (such as their present income, prospective income, and net worth). When, in a period of "tight money" policy of the Federal Reserve, leaders are impelled to impose stricter requirements, then effective mortgage demand is diminished and a larger part of available funds tends to flow into other channels. The reverse, of course, holds true in periods of easier requirements.

With numerous individuals in the economy looking for outlets for their savings, and with numerous individuals and corporate and governmental treasurers looking for sources of long-term financing, a well-organized market has developed to bring the two groups together. Financial intermediaries of all types have organized this market, thereby helping to see to it that long-term savings are allocated to the long-term investments most urgently desired by the economy. They contribute to an increase in economic efficiency by quickly channeling funds from those who want to save into the hands of those who want to invest.

Of the major institutions fulfilling this necessary intermediary role in the economy, commercial banks, mutual savings banks, life insurance firms, and savings and loan associations have become the most important mortgage lenders. Some indication of their importance in mortgage lending is given by the data on residential mortgage debt held by such intermediaries at the present time. At the end of 1957, they held the vast bulk of the 1- to 4-family residential mortgage debt. Noticeable shifts have occurred, however, in the relative importance of these intermediaries in mortgage financing over the past half century. During that period, when mortgage debt financing rose by fifty-fold, commercial banks increased their share from 5 to 15 percent; life insurance firms increased theirs from 6 to 20 percent; savings and loan associations increased theirs from about 15 to 35 percent, but

mutual savings banks suffered a decline, from about 20 to 13 percent of the total. But more noticeable than the decline in the importance of mutual savings banks had been the steep drop in the importance of individuals in mortgage financing—a drop from 50 percent of the total at the turn of the century to 13 percent today. Obviously, institutions now dominate the field.

All of these institutions have an important part to play in allocating a reasonable proportion of the total pool of savings to the future mortgage market. It would appear, however, that because of the differential impact of monetary policy on the various types of financial institutions, being by far the heaviest on commercial banks, the latter could be forestalled on occasion from playing their desired role in the financing of new housing. Even if such a situation would not affect the total flow of funds into mortgages to quite the same degree as it affected bank mortgage lending, there would still be a substantial amount of needless instability in the financing picture. The traditional instruments of monetary regulation may need to be broadened in order to meet the challenges and problems created by our modern financial structure.

This leads into the question of the differential impact of monetary policy on the overall mortgage field. The fluctuating availability of residential mortgage money may be explained to some extent by sticky or artificially low interest rates on certain kinds of mortgages. At times when monetary policy is seeking to restrict credit generally, or in periods of heavy demand for credit, these low rates cause funds to be diverted to alternative uses. More specifically, we have noted a drying-up of funds for fixed-interest FHA and VA mortgages on each occasion in the postwar period when business and industrial financing demands have increased markedly and corporate bond yields have risen sharply. Conversely, we have seen the reverse whenever nonresidential demands have fallen, so that—as some have argued—the longer term demand for mortgage funds was satisfied in a neat countercyclical fashion. The persistence into the second decade of the postwar housing market of such a situation of alternately expanding and contracting nonmortgage demands for credit, if accompanied by inflexible interest rates on mortgages, might cause financing problems throughout much of the period—particularly in view of the anticipated heavy demand for mortgage credit.

As already noted, the first postwar decade was characterized by a far greater rate of increase in the use of mortgage funds than in the supply of funds available for such purposes. That trend could be reversed—in the form of higher downpayments or shorter mortgage terms—only at the cost of cutting off some of the heavy housing demand soon to be facing the market. The solution, then, apparently lies in the introduction of greater flexibility into the mortgage rate structure, in order that housing may compete effectively at all times with other users of long-term investment funds. (Of course, the special attractiveness of VA and FHA loans should permit their rates to remain at a *relatively* low, though fluctuating, level.) Otherwise—and especially if the many pressures on our resources cause as high a

level of long-term interest rates as many expect—housing may tend to find itself being pushed farther and farther back in the long line of hungry borrowers.

TABLE 86.—*Selected individual savings, residential debt, and residential construction*

[Values in billions of dollars]

Year	Savings accounts and life insurance reserves [1]			Nonfarm residential mortgage debt				Total, nonfarm residential construction
		Increase			Increase			
	Total, end of year	Total	As percent of new construction	Outstandings, end of year	Total	As percent of increase in savings accounts and life insurance reserves	Ratio to total savings	
1948	115.5	5.4	53.5	41.5	5.8	107.4	0.36	10.1
1949	121.2	5.7	59.4	46.5	5.0	87.7	.38	9.6
1950	126.8	5.6	39.7	54.9	8.4	150.0	.43	14.1
1951	134.6	7.8	62.4	62.5	7.6	97.4	.46	12.5
1952	146.3	11.7	91.4	69.6	7.1	60.7	.48	12.8
1953	158.5	12.2	88.4	77.3	7.7	63.1	.49	13.8
1954	171.9	13.4	87.0	87.1	9.8	73.1	.51	15.4
1955	184.8	12.9	69.0	100.1	13.0	100.8	.54	18.7
1956	198.9	14.1	79.7	111.5	11.4	80.9	.56	17.7
1957	215.0	16.1	94.7	120.5	9.0	55.9	.56	17.0
1960	264.0	16.6	89.7	154.0	11.1	66.9	.58	18.5
1965	352.0	19.1	83.8	216.0	13.7	71.7	.61	22.8
1970	457.0	22.3	79.6	295.0	16.8	75.3	.65	28.0
1948–57		104.9	74.0		84.8	80.8		141.7
1961–70		193.0	82.1		141.0	73.1		235.0

[1] Includes savings accounts in savings associations, mutual savings banks, commercial banks, postal savings, and credit unions. Private pension reserves are not included.

Source: Financial data—Monthly Labor Review, October 1957 (1948–56); 1957 estimated. Construction expenditures—Survey of Current Business, July 1958.

THE AVAILABILITY OF RESIDENTIAL MORTGAGE CREDIT

SAUL B. KLAMAN, Economist, National Association of Mutual Savings Banks, New York, N. Y.

These answers are provided in response to the following questions:

> What was the dollar volume of capital funds potentially available for mortgage credit on new residential construction in each of the years 1948–57? How much of this potential amount was actually so used in each year? What factors account for the percentage variation from year to year? To what extent should this percentage be increased during the period 1961–70?
>
> What are the prospects for increasing the pool of credit available for new residential construction during the period 1961–70?

The framework within which answers are provided to these questions depends in large part upon the interpretation of the terms "capital funds" and "potentially available." In the broadest sense, all financial flows in any given year are potentially available for investment in mortgages. The so-called short-term and long-term financial sectors are linked by changes in relative interest rates, by the simultaneous operation of some financial institutions in both sectors, and by the pervasive influence of Federal Reserve and Treasury operations on all financial markets. In this setting, it is not entirely possible to quantify the volume of mortgage funds potentially available, because credit made available through the commercial banking system, for example, depends upon the determination of bank reserves by Federal Reserve authorities.

A narrower interpretation of the question which lends itself to a manageable, yet meaningful, answer seems necessary. In such an interpretation, one may choose to include in the total of funds available for residential mortgages, all additions to savings through financial intermediaries and other sources. The choice may be limited, on the other hand, to those funds which are typically placed in long-term investments, a type most closely related to mortgages. Implicit in the latter choice is a distinction between "capital market flows" and other types of financial flows.

Such a distinction in an economy where markets for goods and services, as well as for financial claims, are often closely interrelated must be somewhat arbitrary. Even so, narrowing the scope of our discussion to capital market flows, which may be defined here to include mortgages, corporate securities, State and local, and United States Government obligations—where competitive uses of investor funds are clearly in evidence—seems to be more pertinent to the basic questions under consideration. Thus, typical short-term uses of credit

to consumers, businesses, farmers, and others are not considered to be alternatively available for mortgages. This is not altogether so, of course, particularly in the case of alternative uses of commercial bank credit. Short-term credit extensions, however, generally fluctuate in response to different demand forces, and their inclusion in analysis here would tend to obscure the basic factors underlying fluctuations in mortgage credit.

NET FLOWS OF CAPITAL FUNDS

The net flow of capital funds into markets for corporate securities, State and municipal government obligations, Treasury issues, and mortgages, as shown in table 1, increased almost without interruption in the 10-year period under consideration, from a low of less than $16 billion in 1948 and 1949 to a high of nearly $29 billion in 1957. These flows, in the narrower definition used in this paper, constituted the total pool of capital funds potentially available for residential mortgage credit. The amounts actually used for this purpose, however, varied widely over the decade from a little over $5 billion in 1949 to a peak of over $13 billion in 1955 (table 87). Since 1955 the net volume of residential mortgage flows has declined substantially.

TABLE 87.—*Net flow of funds into capital market securities*

[Amounts in billions of dollars]

Year	Net capital market flows [1]	Residential mortgage flows	
		Amount	Percent of total net capital market flows
1948	15.6	5.9	37.8
1949	15.9	5.3	33.3
1950	17.4	8.7	50.0
1951	18.7	7.8	41.7
1952	24.7	7.5	30.4
1953	26.1	8.2	31.4
1954	25.3	10.2	40.3
1955	28.2	13.4	47.5
1956	26.9	11.4	42.4
1957	28.6	9.2	31.8
1948–57	227.4	87.6	38.5

[1] Includes flows of funds into corporate securities, State and municipal, and Federal obligations, and mortgages.

Source: Board of Governors of the Federal Reserve System and National Bureau of Economic Research

Expressed in terms of percentage ratios, shown in the upper panel of chart 1, the net flow of funds into residential mortgages fluctuated from three-tenths to one-half of total net capital market flows in the 1948–57 period. This fluctuation reflected not only the swings in residential mortgage flows but in flows to other sectors of the capital market as well. Over the full decade, it is clear that residential mortgages were the largest investment outlet in the capital market, as suggested in the lower panel of figure 9, absorbing nearly $88 billion of funds, compared with $70 billion for corporate securities, $34 billion for State and local government securities, and $20 billion for nonresidential mortgages. Moreover, annual flows into residential mortgages, notwithstanding significant variations, exceeded those into each

of the other capital market sectors in 7 of the 10 years through 1957.

That the share of capital funds invested to finance the building and purchase of residential units has generally been larger than the share invested to finance business and governmental activities is in itself a significant fact. Of far greater significance in a study of the appropriate role of Federal programs in housing and mortgage markets is the extent of variation in residential mortgage flows and the factors underlying these variations. To the extent that present Federal policies may have been a factor in the record of instability and possible inadequacy of mortgage flows, either by directly contributing to or by being powerless to combat underlying forces, modification or supplementation of these policies may be indicated.

Within limits set by the committee's time schedule, it is not possible to develop fully all of the material pertinent to the questions directed to me. The committee may find it useful, therefore, to supplement this monograph by reference to a preliminary draft of a study, The Postwar Mortgage Market, which I have recently completed for the National Bureau of Economic Research. Chapters 1, 3, 4, and 5 of this study seem particularly pertinent to the committee's inquiry and provide the foundation for a substantial part of my reply.

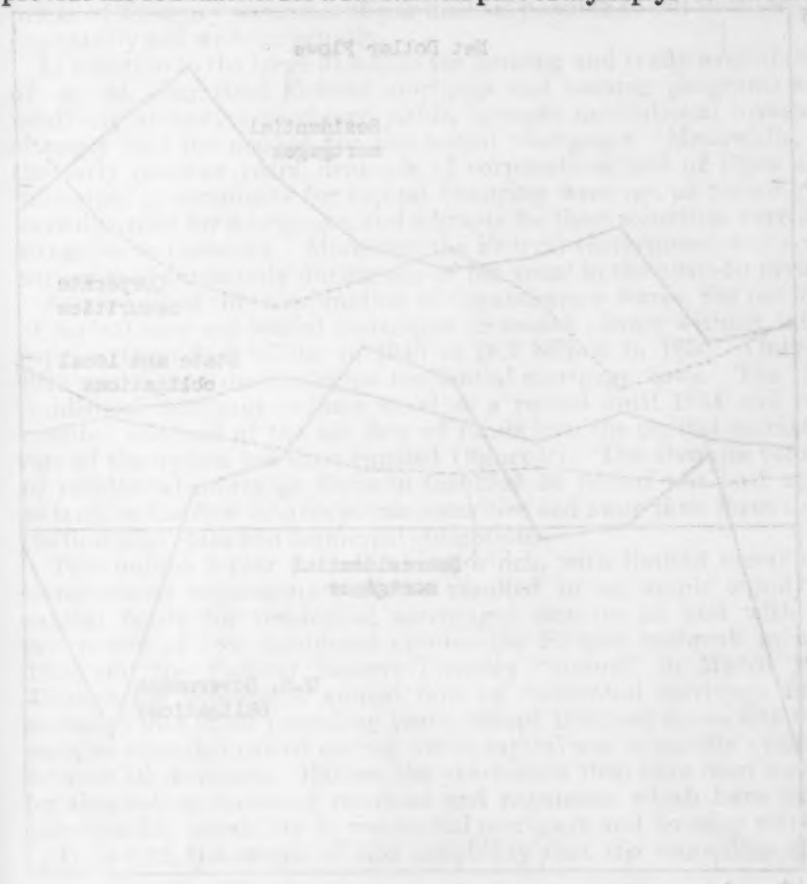
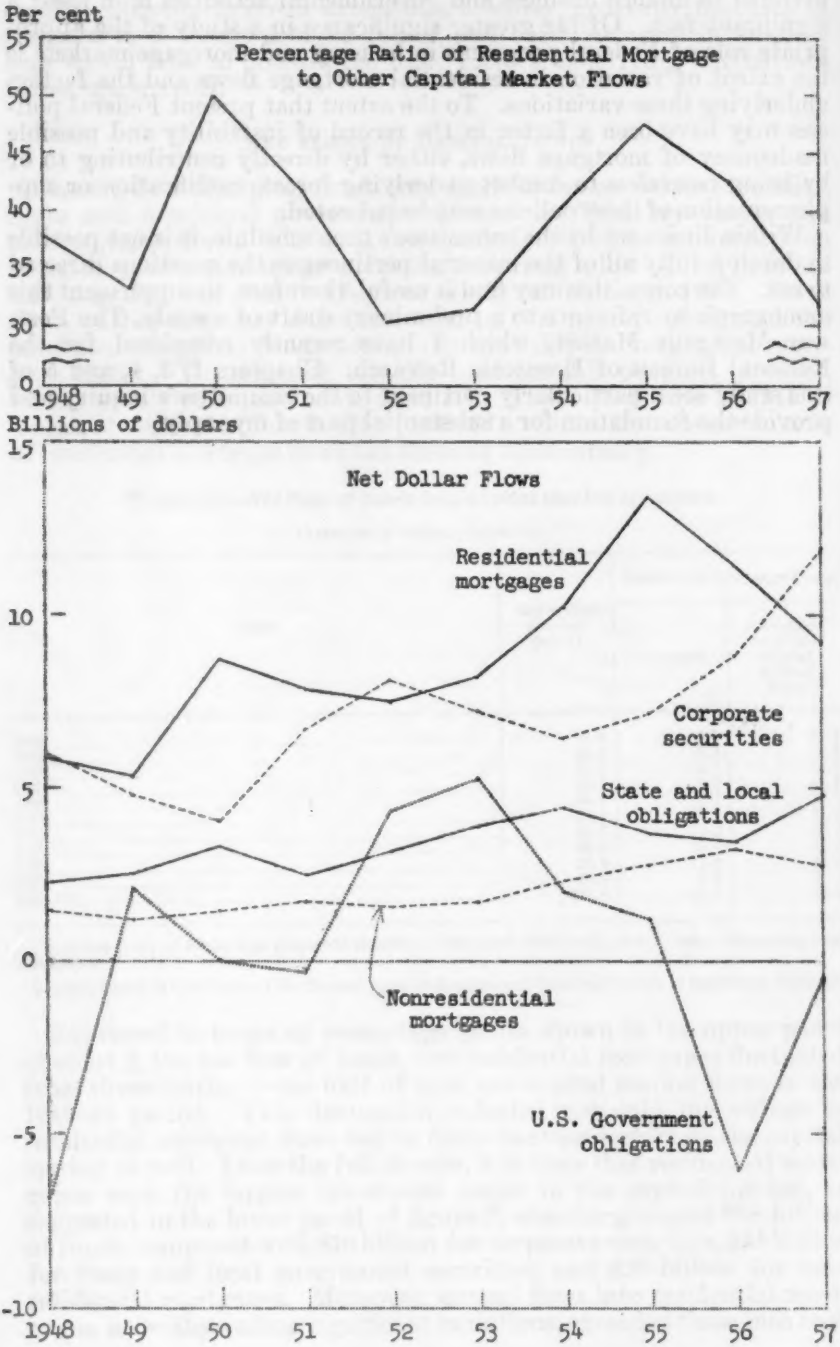


FIGURE 9
Net Annual Flows of Capital Funds, 1948-1957



NOTE.—Data represent net changes in outstanding amounts. Through 1956, figures on net mortgage flows are from Saul B. Klaman, The Volume of Mortgage Debt in the Postwar Decade, Technical Paper 13, National Bureau of Economic Research, 1958. For 1957, figures are based on estimates of the Board of Governors of the Federal Reserve System. Data for other series for 1948 and 1949 are from the Board of Governors of the Federal Reserve System, Flow of Funds in the United States, 1939–53, and for later years are from mimeographed material available from the Board. The percentage ratio in the upper panel of the chart represents the relationship between the net increase in mortgages outstanding to the total net increase in corporate, State and local, and United States Government securities. Net decreases in United States Government securities are treated as sources rather than uses of funds and hence do not have the effect of reducing the total net capital market flow figures.

FACTORS UNDERLYING VARYING RESIDENTIAL MORTGAGE FLOWS

When World War II ended, all of the economic forces at work combined to provide a favorable setting for a substantial increase in residential mortgage lending. The Nation's expanded needs for additional and improved housing facilities, following sharply reduced production during years of war and depression, are well known. These needs were made effective by relatively full employment, high incomes, and large war-accumulated savings. Financial institutions, holding large amounts of riskless but low-yielding United States Government obligations, were actively seeking new investment outlets. The policy followed by the Federal Reserve System of supporting prices of Treasury securities at par made it possible to sell such securities readily and without penalty.

In addition to the large demands for housing and ready availability of capital, liberalized Federal mortgage and housing programs and relatively attractive mortgage yields, brought institutional investors strongly into the market for residential mortgages. Meanwhile, in the early postwar years, demands of corporations and of State and municipal governments for capital financing were not as pressing as were demands for mortgages, and markets for these securities were less attractive to investors. Moreover, the Federal Government was a net borrower of funds only during one of the years in the 1946–50 period.

As a result of this combination of expansionary forces, the net flow of capital into residential mortgages increased almost without interruption from $4.8 billion in 1946 to $8.7 billion in 1950. Only in 1949 was there a decline in net residential mortgage flows. The 1950 residential mortgage volume stood as a record until 1954 and represented one-half of the net flow of funds into the capital market, a rate of absorption not since equaled (figure 9). The absolute volume of residential mortgage flows in the 1946–50 period was half again as large as the flow into corporate securities and more than three times the flow into State and municipal obligations.

This unique 5-year period during which, with limited exceptions, unrestrained expansionary forces resulted in an ample supply of capital funds for residential mortgages came to an end with the occurrence of two significant events—the Korean outbreak in mid-1950 and the Federal Reserve-Treasury "accord" in March 1951. Though the subsequent annual flow of residential mortgage funds exceeded that in all preceding years, except 1950, not again was there such an extended period during which capital was so readily available to meet all demands. Rather, the years since 1950 have been marked by alternating forces of restraint and expansion which have led to considerable instability in residential mortgage and housing markets.

It is with the causes of this instability that the committee is un-

doubtedly concerned—and justifiably so. For if these can be ferreted out and dealt with effectively much will have been accomplished toward achieving the kind of expansion in housing markets which can make the maximum contribution to overall economic growth with relative price stability.

The influence of monetary policy

Over the full period 1951–57, the effective operation of monetary and credit policy must be accorded a prominent place among the forces influencing the availability of credit in the capital markets, including residential mortgage credit. Financial institutions, no longer enjoying the nearly unlimited liquidity of "preaccord" days, were not able to meet all demands for capital funds at all times. Concurrent with the new and vital force of monetary policy, directly restrictive Federal mortgage policies were in effect for about 3 years after the outbreak of Korean hostilities.

The imposition of regulation X and accompanying FHA and VA regulations, restricting terms on which residential mortgage credit could be made available, represented the first restraining actions taken in nearly 20 years of Federal intervention in real estate and mortgage markets. Other Federal actions, through the Federal National Mortgage Association, Federal Home Loan Bank system, and through the controlled materials plan, were designed to restrain housing production in favor of defense industries. Shortly after the end of the Korean war, the Federal Government returned to its traditional policy of stimulating housing markets, a policy which has continued without interruption except for a brief period during 1955.[1]

The fact that, despite generally expansive Federal mortgage policies since early 1953, residential mortgage funds have been subject to wide fluctuations must be attributed to the influence of general credit and monetary measures and to changing capital market conditions. As shown in figure 9, the rise and fall of residential mortgage flows, both absolutely and relative to other capital market flows, has coincided with periods of general credit ease and restraint, respectively. Thus, during 1954–55 when credit was becoming readily available and yields were declining, residential mortgage flows advanced sharply to a postwar peak, while corporate security flows declined to a level well below the 1952–53 average. Between 1955 and 1957, on the other hand, the flow of funds into residential mortgages contracted sharply as credit restraint strengthened and yields on competitive securities advanced to postwar highs.

Credit restraining forces did not deter corporate borrowers, however, partly because of the tax structure, and investors were increasingly attacted by the rising yields on corporate obligations. As a result, there was a record flow of nearly $12 billion into the market for corporate securities during 1957. This represented an increase of nearly $5 billion from 1955 in contrast to a decline of over $4 billion in the mortgage sector in the same period. It is noteworthy, also, that a record flow of funds found its way into State and local government securities in 1957 accompanying rising yields in that sector of the market.

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[1] For a fairly detailed description of Federal mortgage programs in the years 1950–56 see my monograph, The Postwar Mortgage Market, National Bureau of Economic Research, 1958 (mimeograph), ch. 3, pp. 13–44.

The record is clear, therefore, that during periods of credit ease and falling yields the flow of funds into residential mortgages increases relative to the flow into other capital market sectors, and during periods of credit stringency and rising yields, the flow of funds into corporate and State and municipal securities increases relative to mortgages. Residential mortgage flows, moreover, have generally been more volatile than other types of capital market flows. The fundamental question is, Why do changes in general credit availability fall with heavier impact on residential mortgages than on other capital market instruments? For an explanation, it is necessary to look behind the totals into the component parts of the residential mortgage sector.

Within the 1- to 4-family mortgage sector, where most of the postwar movement in residential mortgage flows has occurred, there have been marked differences in the net flow of funds into FHA, VA, and conventional mortgages. As shown in figure 10, VA and FHA mortgage flows have been much more volatile than conventional mortgage flows. Between 1952 and 1955, for example, when capital market conditions were changing from tightness to ease, the net flow of funds into VA mortgages accelerated from $1.4 billion to $5.3 billion, a nearly threefold increase. The subsequent shift to credit stringency between 1955 and 1957 was accompanied by a drop in VA flows of almost three-fifths, to $2.3 billion. Flows into FHA mortgages were, also, fluctuating during these years, but less violently. Conventional home mortgage flows, meanwhile, were considerably more stable during the years of alternating credit ease and tightness, with a one-third rise from $4.3 billion to $5.7 billion between 1952 and 1955, and a subsequent slight drop to $5.3 billion in 1957.

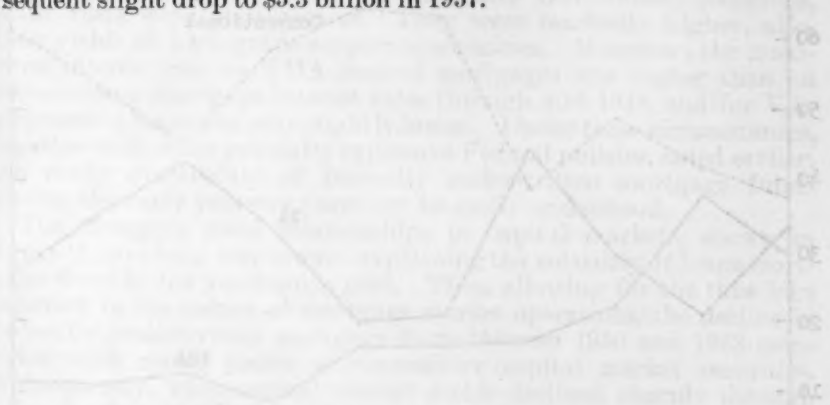
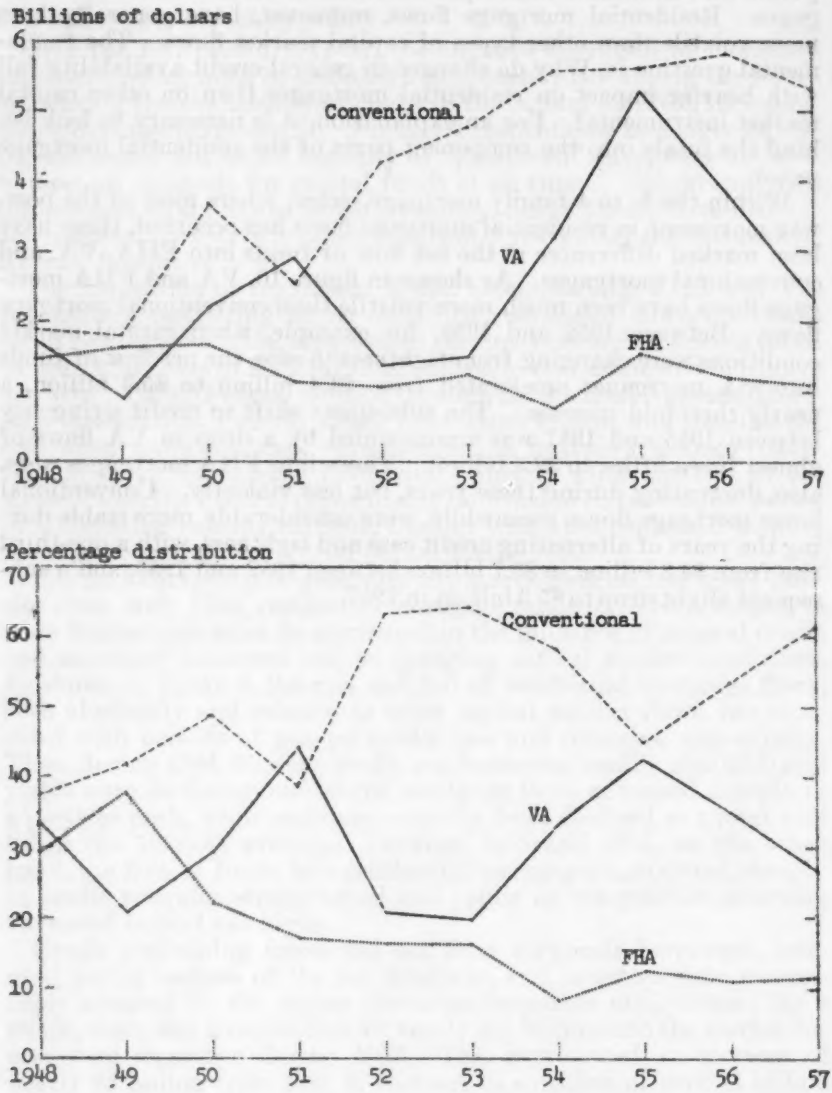


FIGURE 10

Net Annual Flows of Home Mortgage Funds by Type of Mortgage, 1948-1957



Source: Board of Governors of the Federal Reserve System, and Saul B. Klaman, The Volume of Mortgage Debt in the Postwar Decade, Technical Paper 13, Table 22, National Bureau of Economic Research, New York, 1958.

Thus the rapid decline in residential mortgage flows between 1955 and 1957, noted earlier, is explained almost entirely by the decreased availability of federally underwritten mortgages. Of the total net drop of $4 billion, $3.6 billion or 90 percent was accounted for by the decline in VA and FHA mortgage flows. Similarly, of the sharp rise of $3 billion in home mortgage flows during 1955, $2.8 billion was in VA and FHA loans. Among the differences between conventional and federally underwritten mortgages which may account for the differential impact of changes in credit conditions, the relative degree of interest-rate flexibility is among the most significant.

Interest rates and yields

The evidence is unmistakable that the ebb and flow of residential mortgage funds has coincided with narrowing and increasing spreads between FHA and VA interest rates, established by law or regulation, and flexible yields on capital market securities, determined by the interaction of competitive forces. A comparison of data presented in the previous charts with the series on interest rates and yields shown in figure 11 clearly establishes this fact. The shifting response of lenders to changing yield relationships has had an unstabilizing influence not only on mortgage and housing markets but on other capital market sectors as well, as lenders have complemented changes in mortgage flows with changes in other investment actions.

In the early years after World War II, the Federal Government was underwriting VA and FHA mortgages at maximum interest rates of 4 and 4½ percent, respectively. These early postwar rates—subsequently adjusted as shown in figure 11—were substantially higher than market yields on long-term United States Government securities, while risks were little greater. They were markedly higher, also, than yields on high-grade corporate securities. Moreover, the maximum interest rate on FHA-insured mortgages was higher than on conventional mortgage interest rates through mid-1948, and for VA-guaranteed loans was only slightly lower. Under these circumstances, together with other generally expansive Federal policies, noted earlier, the ready availability of federally underwritten mortgage funds during the early postwar years can be easily understood.

The changing yield relationships in capital markets, shown in figure 11, go a long way toward explaining the volatility of home mortgage flows in the years since 1950. Thus, allowing for the time lags inherent in the nature of mortgage market operations, the decline in federally underwritten mortgage flows between 1950 and 1953 coincided with rising yields in competitive capital market securities. Subsequently, when capital market yields declined sharply through 1954, the flow of FHA and VA mortgage funds was stimulated, particularly in view of the recently permitted increase in their interest rates. Finally, the record rise in yields on corporate, State and local, and Treasury securities during 1956–57 was accompanied by the marked reduction in net flows of FHA and VA mortgage funds, noted previously and shown in figure 10.

Throughout these years of shifting relationships between flexible bond yields and administered interest rates on federally aided mortgages, conventional mortgage interest rates moved freely in response to changing market conditions. These movements were more sluggish

than, and lagged behind, changes in bond yields but reflected the adjustments of lenders and borrowers negotiating in free markets, and resulted in a far more even flow of funds over the years than was the case for federally underwritten loans.

The evidence at hand, therefore, strongly supports the conclusion that the policy of maintaining relatively inflexible interest rates on FHA and VA mortgage loans has been a prime factor in the recent instability of residential mortgage flows. To be sure, this has been so only since monetary policy has been an effective force in our economy. That the impact of changes in credit conditions has been greater on residential mortgage markets than on other capital market sectors is clear. But to criticize monetary policy for its role in reducing the availability of funds for residential construction and to ignore the existence of fixed interest rates in the federally underwritten mortgage sector is to overlook the real cause of the uneven impact of monetary policy.

The Federal Reserve System is and must be concerned with the *total supply* of money and credit. The actual allocation of the available supply of funds within the money and capital markets is a function of private competitive forces. It is not now the objective nor, indeed, is it within the power of the Federal Reserve System to allocate credit to particular markets. Individual lenders and borrowers competing for loans and investments are the ultimate determinants of types of credit flows and their uses. Inflexible interest rates in the Government-underwritten sector of the residential mortgage market, however, have interfered with free market processes and have intensified the impact of monetary policy and of general credit developments on residential mortgage flows.

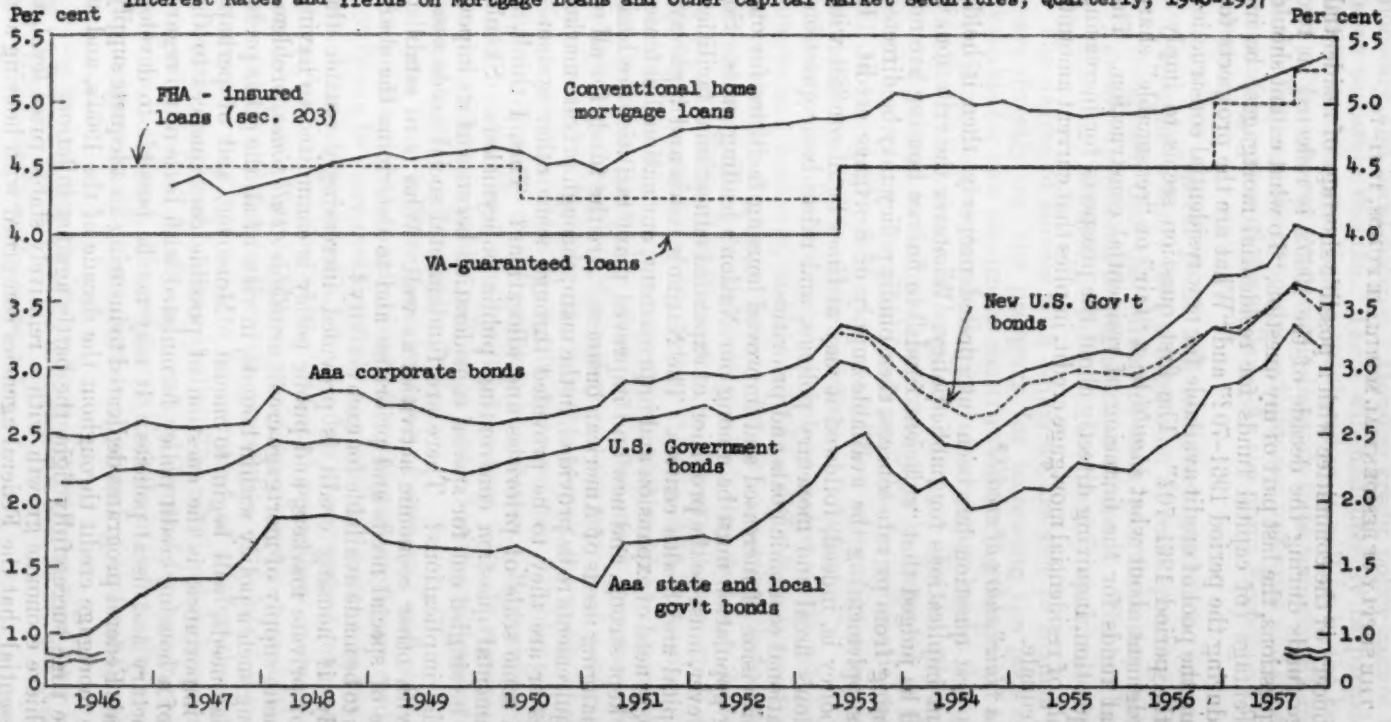
Recent developments have once again shown the uneven results of a policy of inflexible interest rates in mortgage markets—in this case within the federally underwritten sector. The marked increase in housing starts in 1958 over 1957 has reflected entirely the sharp rise in FHA-financed units. Units started under VA mortgage guaranty have declined substantially. Underlying these divergent movements in FHA and VA activity is the fact that the interest rate on FHA loans was increased from 5 to 5¼ percent in August 1957 while the rate on VA loans was fixed at 4½ percent until April 1958 when it was raised to 4¾ percent.

Under these circumstances, FHA loans were more appealing than VA loans to mortgage lenders, in large part because of the problems associated with adjusting VA yields through market discounts. Changes in contract interest rates have been shown to be more effective than discounts in adjusting mortgage yields, and hence in maintaining a more even flow of mortgage funds.[2]

[2] For a discussion of the problems associated with mortgage discounts see my study of The Postwar Mortgage Market, op. cit., ch. 4, pp. 15–24.

FIGURE 11

Interest Rates and Yields on Mortgage Loans and Other Capital Market Securities, Quarterly, 1946-1957



Source: Data on corporate Aaa, municipal Aaa, and U. S. Government securities are quarterly averages of monthly figures. The old U. S. Government bond series consists of fully taxable, marketable 2½-percent bonds due or first callable after 12 years, through September 30, 1955, and those due or callable in 10 to 20 years, beginning October 1, 1955. The new series consists of the 3¼-percent bond of 1978–83 and, beginning February 1, 1955, the 3-percent bond of February 1995. Both series are taken from the Federal Reserve Bulletin. The series on corporate and municipal yields are from Moody's Investor Service.

Data on conventional mortgage interest rates are weighted averages of contract rates on loans closed by 2 life-insurance companies from 1947 to 1951 and by 4 companies from 1951 to 1956; for 1957, data are rough estimates. These data were obtained in connection with a study on The Postwar Mortgage Market for the National Bureau of Economic Research.

THE SUPPLY OF RESIDENTIAL MORTGAGE FUNDS, 1961–70

The concern of the committee with a possible shortage of residential mortgage funds during the decade of the 1960's is reflected in two related questions, the last part of my question, "To what extent should this percentage (of capital funds for residential mortgages) be increased during the period 1961–70?" and "What are the prospects for increasing the pool of credit available for new residential construction during the period 1961–70?" The first question seems to imply a value judgment about what *should* be a "fair" or "reasonable" share of capital funds for the financing of residential construction. The second question, inquiring directly about the prospects for increasing the supply of residential mortgage credit, implies that current amounts are inadequate.

What is a "fair" share of credit?

If the first question has been interpreted properly, then it holds important implications for public policy. Whatever the criterion, if it should be judged that "sufficient funds" to finance housing are not forthcoming from private sources, then public policy may be directed toward supplementing the available supply of mortgage credit. If such a policy is, indeed, followed it may at times be in conflict with the Nation's fiscal and monetary policies, and raises basic questions about national economic goals and priorities.

The provision of increased and improved housing facilities for our growing population must be among our Nation's leading goals. So, too, however, must be the provision of expanded educational facilities, and hospital and health centers. The Nation's roads and highways are, also, in need of expansion and improvement, our national defenses must be kept strong, and new and improved plant facilities are basic to the changing needs of American business. Are the funds for all of these requirements to be provided, in the main, through private market processes or are they to be provided through some other system—through some scale of priorities and allocations? This, I think, is a fundamental question confronting public policymakers. Should housing be singled out for special consideration because of its important social implications? There are fundamental social needs associated with other economic activities as well. Who is to establish the scale of special needs and priorities and to determine the share of funds to be made available for each activity?

Clearly, if housing credit is provided increasingly outside the sphere of private markets, and public policy is committed to having an adequate supply of mortgage credit *available at all times*, problems of keeping such a policy within bounds, in view of all the other pressing social needs, will begin to mount. Moreover, and of perhaps greater importance, is the question of possible consequences to the Nation of a housing credit policy formulated with little or no regard for monetary and fiscal policies. It may not be possible to develop large-scale Federal programs dedicated to insuring an adequate supply of home mortgage credit throughout the decade of the 1960's, and at the same time successfully fight the battle against inflation.

To achieve economic growth with a relatively stable price level, it seems essential that the Federal agencies concerned with housing and mortgage credit set their policies within the framework of overall

monetary and fiscal policies. Housing credit policy cannot be made in an economic vacuum. There will undoubtedly be periods in the 1960's, as there were in the 1950's, when it will be in the best long-run public interest for housing demands to be temporarily restrained as the Nation seeks to subdue inflationary pressures and preserve the purchasing power of the dollar. As the Joint Economic Committee has noted:

> * * * general fiscal and monetary restraints (must be brought to bear) on the expansion of total spending. It is recognized that the burden of such restraints may not be evenly distributed throughout the economy. The burden of inflation, however, is far more inequitably distributed.[3]

The degree of success with which we are able to combat inflation bears directly on "the prospects for increasing the pool of credit available for new residential construction during the period 1961–70." This is so because the availability of mortgage credit depends ultimately on the volume of long-term savings. To the extent that the flow of savings to financial intermediaries is increased in the years ahead, the volume of capital funds available for residential mortgages will be increased. But an increased flow of savings depends fundamentally on allaying widespread fears of inflation.

So long as an inflationary psychology motivates the actions of consumers and investors, so long will it be difficult to increase the flow of residential mortgage funds. In such a setting, individuals will become less willing to save dollars which they feel may depreciate in value, and institutional investors, to the extent permitted, will seek out investments in equity rather than in debt instruments. Thus, while in the short run it may appear that residential mortgage markets suffer at the hands of an anti-inflationary monetary and fiscal policy, only through such a policy can the supply of mortgage credit be increased in the long run. In this respect the words of the Joint Economic Committee are again appropriate: "Public policies must face up squarely to the problem of inflation. Restraining inflation never has been and never will be an easy job. It requires making hard decisions in public policies to contend with problems which may become increasingly complex."[4]

Apart from broader considerations of economic and public policy, the problem of the availability of residential mortgage credit in the 1960's can be more meaningfully approached, it seems to me, through evaluation of the potential *absolute* flow of mortgage funds rather than through consideration of the potential *percentage* increase of total capital funds. Clearly, if one anticipates a large increase in the supply of total capital funds, then the percentage of funds for residential mortgages may not need to be increased at all for there to be an adequate supply of housing credit. The relationship between the increased supply of funds and increased demand for housing would determine, in the end, the need for an increase in the relative availability of mortgage credit. An adequate appraisal of this relationship must

[3] Joint Economic Committee, Subcommittee on Fiscal Policy, Fiscal Policy Implications of the Economic Outlook and Budget Developments, H. Rept. No. 647, 85th Cong., 1st sess., Washington 1957, p. 5.

[4] Joint Economic Committee, op. cit., p. 2.

be founded upon a thorough study of the underlying forces of housing demand—population growth, migration, family formation, changes in income, quality of housing—and the general outlook for capital markets, clearly beyond the scope of this monograph.

In considering the potential absolute flow of mortgage funds in the 1960's the question of stability of flows is as important as the amount. Regardless of the increase which might be achieved in the absolute flow of residential mortgage funds, a continued unstable flow such as has characterized the 1950's will leave the basic problems unsolved. Housing activity represents such an important segment of total economic activity that instability in this area has important implications for overall economic growth and stability. In a narrower framework, planning and related activity incident to housing production is long range in character and is frustrated by rapid and continuing changes in the availability of mortgage funds. The evidence presented in this paper, based on a broad study of postwar mortgage markets, has shown a close relationship between the instability of residential mortgage flows and rigidities in federally underwritten mortgage interest rates. In this respect, the facts suggest a need for a reexamination of current Federal policy.

Prospects for increasing residential mortgage flows

Main sources of mortgage funds.—In appraising the prospects for residential mortgage credit in the years ahead it is a fundamental fact that the sources of mortgage funds are concentrated among the four main types of financial intermediaries—savings and loan associations, mutual savings banks, life insurance companies, and commercial banks. As shown in table 88, these institutions accounted for an estimated 87 percent of net residential mortgage flows in the period 1948–57, and by the end of 1957 held about 84 percent of the total residential mortgage debt outstanding. Unless new sources of funds are to be developed, therefore—a prospect considered later—additional funds for residential mortgages will be provided mainly through an increase in the flow of savings to these intermediaries, or through an increase in the proportion of their assets devoted to mortgage investments.

As to the first consideration, the basic importance of restraining actual inflationary pressures and allaying fears of future inflation has been noted. Upon the continued willingness and ability of individuals to save a portion of current income in the form of bank deposits, savings and loan shares, and life insurance premiums, depends the continued growth of the pool of residential mortgage credit. The problem of stimulating savings in an economy subject to periodic inflationary pressures has been clearly recognized by the Joint Economic Committee. In the report referred to on pages 16–17, the committee noted:

> The basic problem (in inflation) is an inadequate level of savings out of current income. An ever increasing volume of real savings is needed to meet the economy's requirements for replacement of plant and equipment under inflated prices and for growth based upon full exploitation of rapid technological advances. Fiscal and monetary policies should be directed toward encouraging a higher level of voluntary real savings under the present conditions of inflationary pressure.

TABLE 88.—*Residential mortgage loan investments of main types of financial institutions*

[Amounts in billions of dollars]

Type of lender	Outstanding Dec. 31, 1957		Net flows 1948–57	
	Amount	Percent	Amount	Percent
All lenders	121.3	100.0	87.5	100.0
Main financial institutions	101.5	83.7	76.9	87.9
Savings and loan associations	39.3	32.4	30.6	35.0
Life insurance companies	26.1	21.5	21.0	24.0
Mutual savings banks	19.0	15.7	15.1	17.3
Commercial banks	17.1	14.1	10.2	11.7
All other lenders	19.8	16.3	10.0	12.8

Source: Board of Governors of the Federal Reserve System, and Saul B. Klaman, The Volume of Mortgage Debt in the Postwar Decade, op. cit., tables 16–19, and 37–40.

If the inflow of savings to the four main types of financial institutions continues during the decade of the 1960's at about the same rate as during the decade ending 1957, and if these institutions continue to invest about the same proportion of their assets in mortgages, then their flows of residential mortgage credit will amount to over $160 billion, nearly double the flow during the decade 1948–57. The rate of asset expansion during the 1948–57 period, however, following years of depression and war, reflected unusual circumstances not likely to prevail in the decade ahead. The fourfold growth in assets of savings and loan associations, for example, from less than $12 billion to over $48 billion will be hard to match, considering the new high level likely to prevail at the beginning of 1960. The rate of growth in recent years in the assets of these institutions, as well as of the other main types of financial institutions, has already slowed down markedly.

The projected volume of $160 billion of residential mortgage flows from the 4 main types of financial institutions, on the basis of asset growth alone, therefore, is probably an outside figure. It may be possible to achieve this volume or more, however, if the proportion of assets invested in mortgages were to be increased. What are the possibilities of such a development?

As may be seen in table 89, savings and loan associations are already investing over four-fifths of their assets in residential mortgages. There is, thus, little room left for these specialized lending institutions to increase this proportion. As for mutual savings banks, they have increased their total mortgage investments sharply in the postwar years to an alltime high of over 60 percent of assets, of which 54 percent represent residential mortgage loans. Considering the liquidity needs of mutual savings banks, the opportunities available for alternative investment outlets, and the legal limits imposed by most savings bank States, it is not likely that this percentage can be increased much without changing the basic nature and characteristics of these institutions.

TABLE 89.—*Relationship of mortgage loans to total assets of main types of financial institutions, Dec. 31, 1957*

[Amounts in billions of dollars]

Type of financial institution	Total assets	Percentage of assets in—	
		Total mortgages	Residential mortgages
Savings and loan associations	48.3	83.0	81.4
Mutual savings banks	35.2	60.2	54.0
Life insurance companies	101.0	34.9	25.8
Commercial banks	222.7	10.5	7.7

Source: Board of Governors of the Federal Reserve System and National Bureau of Economic Research.

Any consideration of the potential availability of mortgage funds from the mutual thrift institutions must, of course, take account of the potential impact of changes in Federal tax policy. Apart from other considerations, an increase in tax liabilities of these institutions might, on balance, tend to reduce the inflow of savings and hence the availability of mortgage funds. Mortgage investments might, also, be reduced as a result of the increased appeal of tax-exempt securities.

Another consideration bearing on the availability of mortgage funds from mutual savings banks is the fact that these institutions now operate in only 17 States of the Nation and are permitted to lend in other States only on FHA and VA mortgages. Based on current experience in saving banks States, there is a strong likelihood that if mutual savings banks were permitted to operate in other States, overall savings flows would be increased, and hence, also, the availability of mortgage funds.

The other two main types of financial intermediaries—life insurance companies and commercial banks—each have a much smaller share of their assets invested in mortgages than do savings and loan associations and mutual savings banks. Relative to earlier years, however, the current share of assets held in mortgages, for both life insurance companies and commercial banks, is large. Any consideration of the prospects for increasing the relative mortgage investments of life insurance companies and commercial banks, moreover, must take account of the fact that these institutions are oriented toward different and broader investment markets than are savings and loan associations and mutual savings banks.

While there are no legal limits to a further relative expansion in mortgage investments by life insurance companies, many investment officers feel that present holdings have reached a satisfactory relationship to total assets, compared with relatively low war-end levels. Portfolio investment policy is not static, however, and current thinking could change in response to changes in the reationship between residential mortgage yields and yields on alternative investment outlets, including those on nonresidential mortgages. While yield is not the only determinant of the pattern of life insurance company investments—portfolio diversification, mortgage correspondent consideration, being others—the possibility of expanding the acquisition of mortgages relative to other investments rests largely on this factor. The present relationship of residential mortgage holdings to total

assets, while historically high, is below earlier record levels, and could be expanded under appropriate market conditions.

Among the main types of financial intermediaries, commercial banks devote the smallest proportion of their assets, by far, to mortgage loans. This is, of course, understandable considering their basic orientation to short-term credit markets. An important part of commercial bank mortgage holdings, therefore, represents short-term credits in the form of construction loans or interim financing to builders and real-estate mortgage lenders. Some commercial banks, in fact, limit their mortgage activity to these short-term operations, while others—usually, the smaller country banks—devote a significant part of their assets to long-term permanent mortgage loans. This distinction reflects the wide variation in operations among the thousands of commercial banks.

In recent years most commercial banks have been aggressively competing with thrift institutions for the long-term liquid savings of individuals. If commercial bank time deposits continue to grow at anywhere near the 1957–58 rate, the industry may devote an increasing share of their assets to long-term mortgage investments. Admittedly, there has been little apparent relationship between time deposits and mortgage loans in recent years, but this could easily change if time deposits become increasingly important and yields on mortgage loans are attractive relative to business loans.

Other potential sources of mortgage funds.—While there are distinct possibilities for an expansion of residential mortgage credit through an increase in the share of assets used for this purpose by life insurance companies and commercial banks, far greater possibilities would appear to lie in a relative expansion of mortgage investments by other types of miscellaneous institutions with large aggregations of assets. These institutions, shown in table 90, had total assets in excess of $120 billion at the end of 1956, of which only a little over 2 percent were invested in mortgages. In the aggregate, while total assets and mortgage loans have expanded markedly since 1948, their relationships have shown little change.

There is a great potential for an expanded source of mortgage funds from these groups of miscellaneous investors. Even a doubling in the overall percentage of assets devoted to mortgage loans would still leave their mortgage holdings under 5 percent of total assets. Such an increase during the decade ending 1957 would have made an additional $3 million, or so, available for mortgages. Considering the expected expansion in assets of these institutions during the 1960's, a considerably greater increase in mortgage funds might be expected from a gradual increase in the share devoted to mortgages.

TABLE 90.—*Relationship of mortgage loans to total assets of miscellaneous types of financial institutions*

[Dollars in millions]

Type of institution	Dec. 31, 1956			Dec. 31, 1947		
	Total assets	Mortgage loans		Total assets	Mortgage loans	
		Amount	Percent		Amount	Percent
Personal trust funds	$75,000	$1,490	2.0	$48,000	$1,170	2.4
Fire, casualty, and marine insurance companies	22,561	160	.7	10,371	69	.7
Noninsured pension funds	17,654	285	1.6	4,276	30	.8
Credit unions	3,271	271	8.3	701	44	7.4
Fraternal orders	2,669	503	18.9	1,880	184	10.2
Total	121,010	2,709	2.2	67,228	1,497	2.4

Source: Board of Governors of the Federal Reserve System, and Raymond W. Goldsmith, Financial Intermediaries in the American Economy Since 1900, supplementary appendixes, National Bureau of Economic Research, New York, 1958. The 1947 figure for total assets of personal trust funds is an interpolation of Goldsmith's estimates for 1945 and 1949.

Barriers to increased mortgage investments by non-life-insurance companies, trust funds, pension funds, et cetera, exist in the form of legal restrictions, short-term obligations, complexity of mortgage instruments compared with other types of corporate securities, lack of organization for mortgage acquisitions, and general ignorance of mortgage-market operations. These and related barriers, however, are hardly insuperable. Pension funds in the past year or so have shown an increasing interest in mortgages as managers have been made aware of their advantages, and investment techniques have been eased by mortgage bankers. The long-term nature of the obligations of pension funds and their relatively minor mortgage holdings makes this source particularly fertile for further expansion of mortgage investments.

Fire, casualty, and marine insurance companies have been relatively uninterested in mortgage investments because of the uncertain nature of their obligations to policyholders, and because of their feeling that mortgages are less liquid than other long-term investments. Even if these were valid reasons, there would still seem to be room for an expansion in mortgage holdings well beyond the less than 1 percent of assets so invested at the end of 1957. Moreover, the record would probably show that the character of obligations of these companies is not as short term as supposed, and that the liquidity of mortgage loans, particularly FHA and VA loans, has been substantially increased. The average life of mortgage loans is considerably less than their contract maturities, and their nationwide marketability is being proven daily. There is a good opportunity here, through a process of education, to break down traditional investment prejudices and patterns, and release a far greater proportion of the $23 billion of non-life-insurance company assets for residential mortgages.

So, too, with the huge aggregations of funds in personal trusts. Here, the problems are somewhat different than with pension funds and fire and casualty companies, but the opportunities are equally great or greater. Rough estimates of the assets of personal trust

funds back to the turn of the century indicate that mortgage holdings, both absolutely and relatively, have been declining.[5] In 1900, for example, 40 percent of personal trust funds were invested in mortgages. The percentage declined steadily to 22 in 1912, 10 in 1929, 7 in 1939, and 2 since 1949. In absolute terms, a peak of $3 billion was recorded in 1929, following which there was a steady decline to $1 billion in 1952. Since then, there has been an estimated increase to $1.5 billion, still only half of the 1929 level.

The decline in mortgage holdings of personal trust funds has reflected the increased availability and desirability of alternative investments, particularly corporate equity issues, and the loss experience with mortgages during the 1930's. Notwithstanding the substantial changes in the mortgage instrument, following the introduction of Federal mortgage insurance—increased safety, marketability, liquidity—administrators have been reluctant to reenter the mortgage market in volume. Difficulties of acquiring mortgage investments in the right amounts and on appropriate terms, and of administering large numbers of individual instruments, have, so far, seemed too great to overcome.

Because most trust funds are administered by corporate fiduciaries, there are no legal obstacles to investment in federally underwritten mortgages; the case, also, with noninsured pension funds. Becoming FHA-approved mortgagees would entail but a small amount of paperwork. With a minimum of legal obstacles to contend with, the main effort can be directed toward overcoming obstacles of tradition, ignorance, and prejudice with respect to the advantages of mortgage investments.

All in all, the potential for increasing the pool of residential mortgage credit in the 1960's through the large aggregations of funds, shown in table 90, would seem to be substantial. The prospects for realizing the potential will depend in large part on the ability of the mortgage banking and related industries to convince these groups of the wisdom of devoting a larger share of their assets to mortgage investments. The Federal Government, through this committee and other agencies, can help by making and sponsoring appropriate studies which would compare the investment results of mortgages and other types of capital-market securities.

Along this line, one important step the committee might take is to sponsor or urge the collection of more data on mortgage holdings of corporate fiduciaries and other miscellaneous institutions. Data shown in table 90 are for total mortgage loans only, because there are no current data available on residential mortgage holdings. Nor are there data for these miscellaneous types of institutions on holdings of FHA and VA loans, the most logical area for further expansion. Several years ago, in connection with the administration of regulation X, data were obtained by the Federal Reserve System on the residential mortgage holdings—including a breakdown of FHA, VA, and conventional loans—of trust departments of commercial banks. Such information has not since been available.

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[5] Raymond W. Goldsmith, Financial Intermediaries in the American Economy Since 1900, supplementary appendix 5, tables B–1 and B–2, National Bureau of Economic Research, New York, 1958.

The committee might wish to recommend that the Bureau of the Census, in connection with its 1960 census of housing, explore the feasibility of collecting more detailed data than are now available on the residential mortgage holdings of personal trust funds, noninsured pension funds, fire, casualty, and marine insurance companies, credit unions, fraternal orders, et cetera. Such information will be basic to any study relating to the prospects for increasing the pool of residential mortgage credit in the years ahead.

POSTWAR TRENDS IN THE SOURCES AND USES OF CAPITAL FUNDS, 1947–57

Dr. JAMES J. O'LEARY, Director of Economic Research, Life Insurance Association of America, New York, N. Y.

This paper is in response to the questions that follow:

What was the dollar volume of capital funds potentially available for mortgage credit on new residential construction in each of the years 1948–57? How much of this potential amount was actually so used in each year? What factors account for the percentage variation from year to year? To what extent should this percentage be increased during the period 1961–70?

What are the prospects for increasing the pool of credit available for new residential construction during the period 1961–70?

The purpose of this paper is to provide a general discussion of trends in the sources and uses of capital funds in the American economy during the postwar period, with particular reference to the availability of financing for residential construction. It will deal with such questions as how important residential capital formation has been in contributing to the demand for investment funds and what are the principal sources from which funds have been derived to meet this demand. It will also endeavor to place the use of capital funds for residential financing in perspective with other competing uses of funds such as corporate, Federal Government, and State and local government financing.

In the interest of clarity, it should be stated at the outset that the figures are for net sources and uses of capital funds, i. e., they exclude refinancing. For example, the net flow of funds from life insurance companies into the capital markets in 1957 amounted to $4.8 billion. We know from other studies that the gross flow of life insurance funds, taking into consideration such things as bond maturities and calls and mortgage repayments, totaled about $9 billion in 1957. It would be most helpful to have gross flow figures for the various savings institutions, but unfortunately we do not have them so that we are required to depend on the net figures. This may not be much of a handicap in any event because the elements of refinancing are pretty much of a "washout" on both the demand and supply sides in the market. For example, if a corporation issues bonds to refinance some of its outstanding debt, the demand for funds is increased but at the same time the supply of funds is also increased in the same amount. Gross flow figures would be valuable, nonetheless, because they are undoubtedly important in their effects on individual sectors of the capital markets.

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All of the uses of capital funds are, of course, also net; i. e., they show net increases in the outstanding obligations.

It should also be kept in mind that these figures are not net changes in assets. By excluding asset changes such as an increase in cash or a net addition to company properties, we have tried to obtain a net figure of funds actually coming into the capital markets.

TRENDS IN SOURCES AND USES OF CAPITAL FUNDS, 1947–57

Trend in the total supply of capital funds available from savings sources

Figure 12 and table 91 show the trend in the total supply of capital funds available from savings sources during the period 1947–57. The lower portion of figure 12 labeled "savings institutions" includes life insurance companies, savings and loan associations, mutual savings banks, and the time deposits of commercial banks. As shown in table 91, the total for these institutions rose sharply from $7.4 billion in 1950 to $16.3 billion in 1954, with moderate tapering off until 1957. The reasons for the tapering off since 1954 can be considered better in figure 13 and table 92 which follow.

The upper portion of figure 12, "other nonbank sources," includes State and local government funds, uninsured corporate pension funds, fire and casualty companies, corporations, United States Government funds such as OASI, and all other nonbank sources of funds, the latter being in the main individuals and unincorporated business. The detail on these sources will appear in figure 14 and table 93, to be examined presently.

FIGURE 12

Total Capital Funds Available From Savings Sources, 1947-1957
(Billions of Dollars)

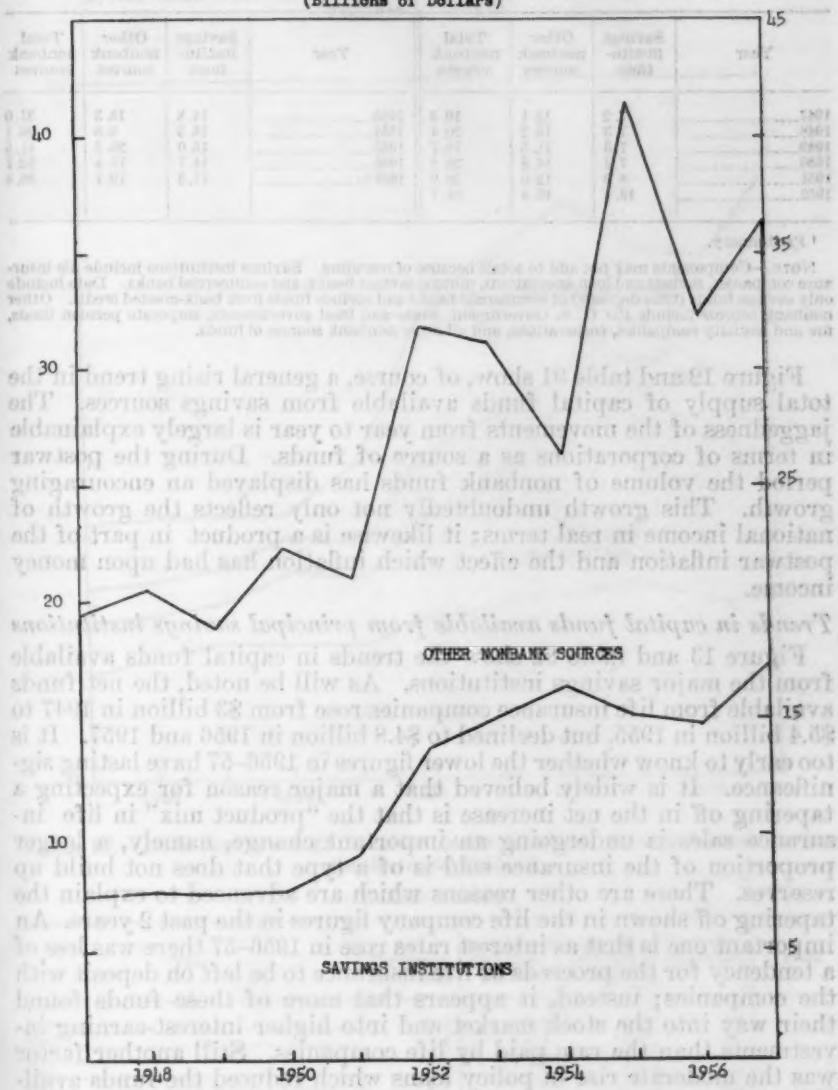


TABLE 91.—*Data for figure 12: Total capital funds available from savings sources, 1947–57*

[Billions of dollars]

Year	Savings institutions	Other nonbank sources	Total nonbank sources	Year	Savings institutions	Other nonbank sources	Total nonbank sources
1947	7.2	12.1	19.3	1953	14.8	16.3	31.0
1948	7.3	13.2	20.4	1954	16.3	9.8	26.1
1949	7.3	11.5	18.7	1955	15.0	26.5	41.5
1950	7.4	14.8	22.2	1956	14.7	17.4	32.1
1951	8.9	12.0	20.9	1957 [1]	17.3	19.1	36.4
1952	13.4	18.4	31.7				

[1] Preliminary.

NOTE.—Components may not add to totals because of rounding. Savings institutions include life insurance companies, savings and loan associations, mutual savings banks, and commercial banks. Data include only savings funds (time deposits) of commercial banks and exclude funds from bank-created credit. Other nonbank sources include the U. S. Government, State and local governments, corporate pension funds, fire and casualty companies, corporations, and all other nonbank sources of funds.

Figure 12 and table 91 show, of course, a general rising trend in the total supply of capital funds available from savings sources. The jaggedness of the movements from year to year is largely explainable in terms of corporations as a source of funds. During the postwar period the volume of nonbank funds has displayed an encouraging growth. This growth undoubtedly not only reflects the growth of national income in real terms; it likewise is a product in part of the postwar inflation and the effect which inflation has had upon money income.

Trends in capital funds available from principal savings institutions

Figure 13 and table 92 show the trends in capital funds available from the major savings institutions. As will be noted, the net funds available from life insurance companies rose from $3 billion in 1947 to $5.4 billion in 1955, but declined to $4.8 billion in 1956 and 1957. It is too early to know whether the lower figures in 1956–57 have lasting significance. It is widely believed that a major reason for expecting a tapering off in the net increase is that the "product mix" in life insurance sales is undergoing an important change, namely, a larger proportion of the insurance sold is of a type that does not build up reserves. There are other reasons which are advanced to explain the tapering off shown in the life company figures in the past 2 years. An important one is that as interest rates rose in 1956–57 there was less of a tendency for the proceeds of life insurance to be left on deposit with the companies; instead, it appears that more of these funds found their way into the stock market and into higher interest-earning investments than the rate paid by life companies. Still another factor was the moderate rise in policy loans which reduced the funds available to the capital market. The investment research staff is planning a further study of the forces affecting the asset growth of life insurance companies.

FIGURE 13

Capital Funds Available From Principal Savings Institutions, 1947-1957
(Billions of Dollars)

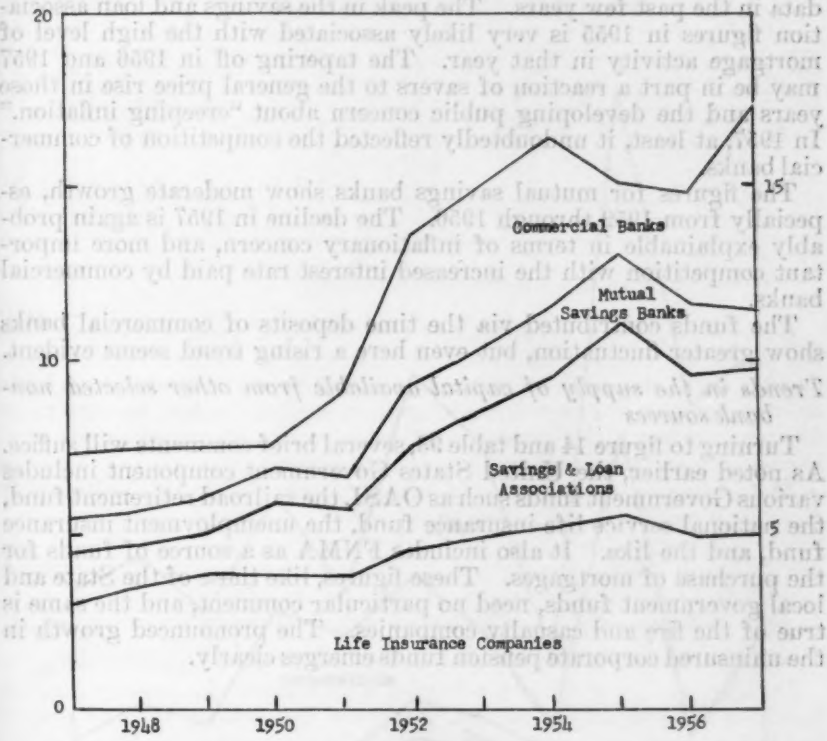


TABLE 92.—*Data for figure 13: Capital funds available from principal savings institutions, 1947–57*

[Billions of dollars]

Year	Life insurance companies	Savings and loan associations	Mutual savings banks	Commercial banks	Total
1947	3.0	1.5	0.9	1.8	7.2
1948	3.4	1.2	1.0	1.7	7.3
1949	3.7	1.3	1.0	1.3	7.3
1950	3.7	2.1	1.0	.6	7.4
1951	3.7	2.0	.8	2.4	8.9
1952	4.5	3.0	1.7	4.2	13.4
1953	4.8	3.7	1.8	4.5	14.8
1954	5.1	4.3	2.0	4.9	16.3
1955	5.4	5.6	2.0	1.9	15.0
1956	4.8	4.7	2.1	3.1	14.7
1957 [1]	4.8	4.8	1.8	5.9	17.3

[1] Preliminary.

NOTE.—Components may not add to totals because of rounding.

The data for savings and loan associations show the great growth by these institutions in the postwar period, from a net contribution of $1.2 billion to the capital markets in 1948 to a peak of $5.6 billion in 1955 and a sloping off in the past 2 years. It is interesting to see the parallel between the savings and loan association and the life company data in the past few years. The peak in the savings and loan association figures in 1955 is very likely associated with the high level of mortgage activity in that year. The tapering off in 1956 and 1957 may be in part a reaction of savers to the general price rise in those years and the developing public concern about "creeping inflation." In 1957, at least, it undoubtedly reflected the competition of commercial banks.

The figures for mutual savings banks show moderate growth, especially from 1952 through 1956. The decline in 1957 is again probably explainable in terms of inflationary concern, and more important competition with the increased interest rate paid by commercial banks.

The funds contributed via the time deposits of commercial banks show greater fluctuation, but even here a rising trend seems evident.

Trends in the supply of capital available from other selected nonbank sources

Turning to figure 14 and table 93, several brief comments will suffice. As noted earlier, the United States Government component includes various Government funds such as OASI, the railroad retirement fund, the national service life insurance fund, the unemployment insurance fund, and the like. It also includes FNMA as a source of funds for the purchase of mortgages. These figures, like those of the State and local government funds, need no particular comment, and the same is true of the fire and casualty companies. The pronounced growth in the uninsured corporate pension funds emerges clearly.

FIGURE 14

Capital Funds Available From Other Selected Nonbank Sources, 1947-1957
(Billions of Dollars)

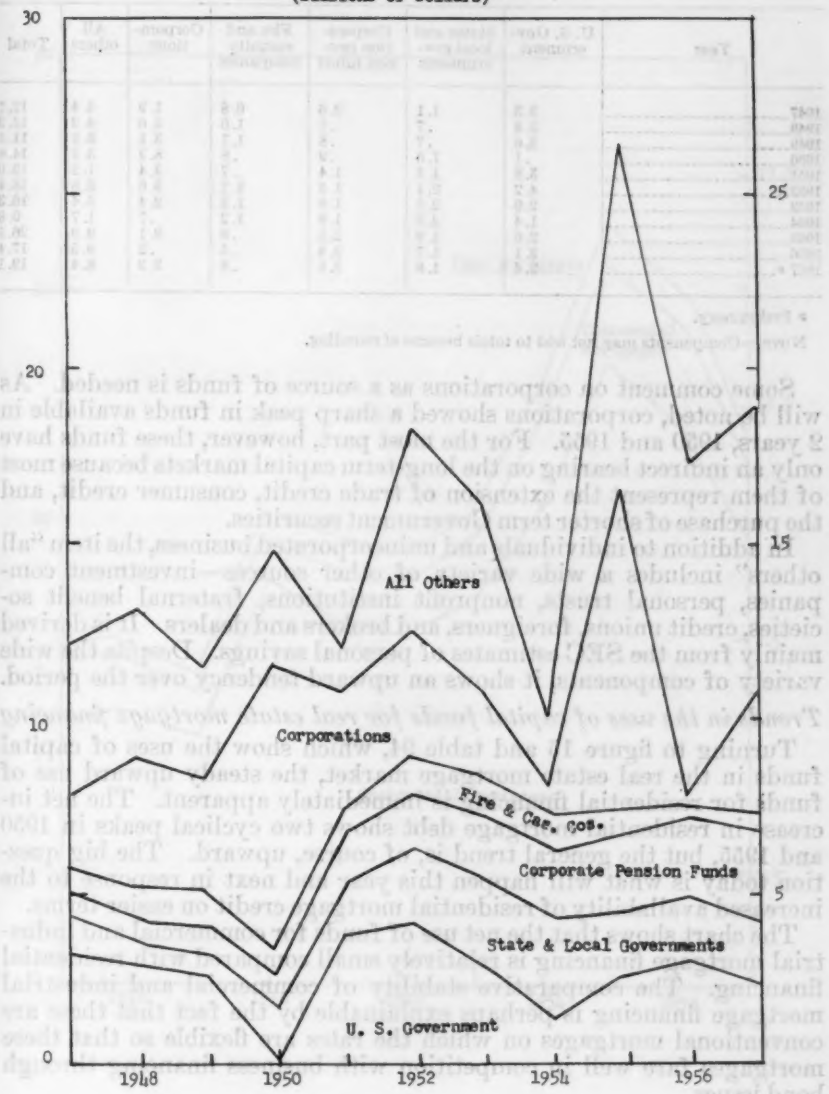


TABLE 93.—*Data for figure 14: Capital funds available from other selected nonbank sources, 1947–57*

[Billions of dollars]

Year	U. S. Government	States and local governments	Corporation pension funds	Fire and casualty companies	Corporations	All others	Total
1947	3.3	1.1	0.6	0.8	1.9	4.4	12.1
1948	2.9	.7	.7	1.0	3.6	4.3	13.2
1949	2.6	.7	.8	1.1	3.1	3.2	11.5
1950	.1	1.6	.9	.8	8.2	3.2	14.8
1951	3.8	1.5	1.4	.7	3.4	1.2	12.0
1952	4.2	2.1	1.5	1.2	3.6	5.8	18.4
1953	2.9	2.5	1.8	1.3	2.4	5.4	16.3
1954	1.4	2.9	1.9	1.2	.7	1.7	9.8
1955	2.6	1.9	2.1	.9	9.1	9.9	26.5
1956	3.1	1.7	2.4	.5	.2	9.5	17.4
1957 ᵖ	2.4	1.8	2.5	.8	3.2	8.4	19.1

ᵖ Preliminary.

NOTE.—Components may not add to totals because of rounding.

Some comment on corporations as a source of funds is needed. As will be noted, corporations showed a sharp peak in funds available in 2 years, 1950 and 1955. For the most part, however, these funds have only an indirect bearing on the long-term capital markets because most of them represent the extension of trade credit, consumer credit, and the purchase of shorter term Government securities.

In addition to individuals and unincorporated business, the item "all others" includes a wide variety of other sources—investment companies, personal trusts, nonprofit institutions, fraternal benefit societies, credit unions, foreigners, and brokers and dealers. It is derived mainly from the SEC estimates of personal savings. Despite the wide variety of components, it shows an upward tendency over the period.

Trends in the uses of capital funds for real estate mortgage financing

Turning to figure 15 and table 94, which show the uses of capital funds in the real estate mortgage market, the steady upward use of funds for residential financing is immediately apparent. The net increase in residential mortgage debt shows two cyclical peaks in 1950 and 1955, but the general trend is, of course, upward. The big question today is what will happen this year and next in response to the increased availability of residential mortgage credit on easier terms.

The chart shows that the net use of funds for commercial and industrial mortgage financing is relatively small compared with residential financing. The comparative stability of commercial and industrial mortgage financing is perhaps explainable by the fact that these are conventional mortgages on which the rates are flexible so that these mortgages fare well in competition with business financing through bond issues.

FIGURE 15

Uses of Capital Funds in the Real Estate Mortgage Market, 1947-1957
(Billions of Dollars)

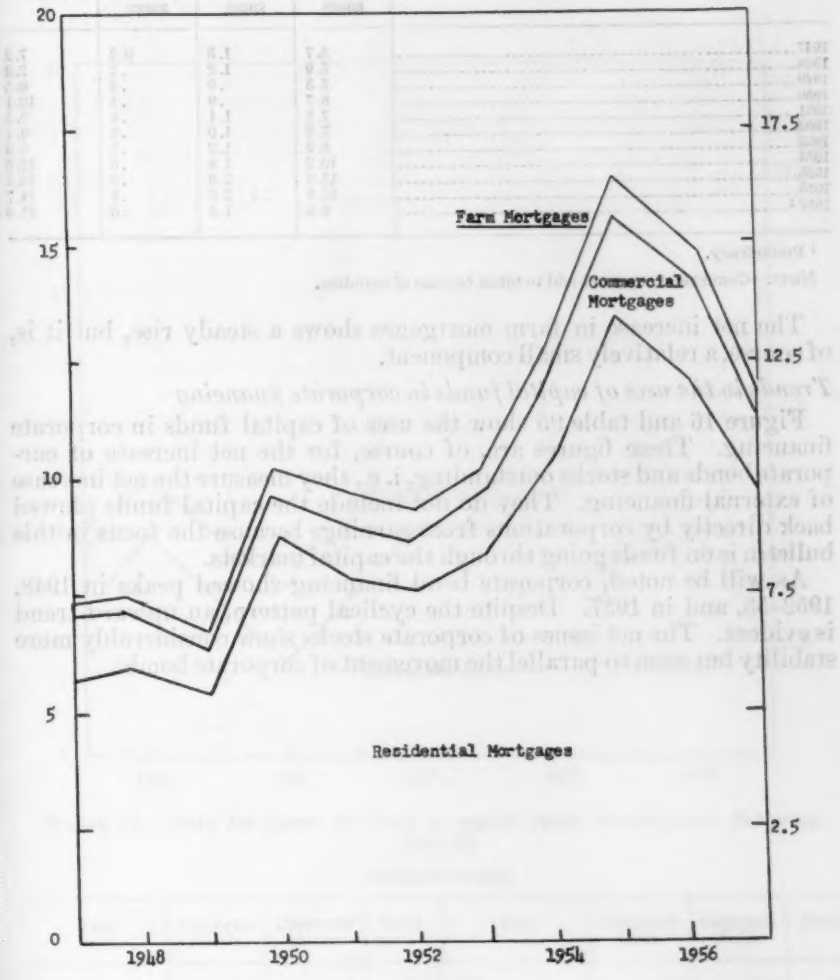


TABLE 94.—*Data for figure 15: Uses of capital funds in the real estate mortgage market, 1947–57*

[Billions of dollars]

Year	Residential mortgages	Commercial mortgages	Farm mortgages	Total
1947	5.7	1.3	0.2	7.2
1948	5.9	1.2	.2	7.3
1949	5.3	.9	.3	6.5
1950	8.7	.9	.5	10.1
1951	7.8	1.1	.6	9.5
1952	7.5	1.0	.6	9.1
1953	8.2	1.2	.5	9.9
1954	10.2	1.8	.5	12.5
1955	13.3	2.0	.8	16.2
1956	12.0	2.0	.8	14.7
1957 [1]	9.5	1.5	.6	11.6

[1] Preliminary.

NOTE.—Components may not add to totals because of rounding.

The net increase in farm mortgages shows a steady rise, but it is, of course, a relatively small component.

Trends in the uses of capital funds in corporate financing

Figure 16 and table 95 show the uses of capital funds in corporate financing. These figures are, of course, for the net increase of corporate bonds and stocks outstanding, i. e., they measure the net increase of external financing. They do not include the capital funds plowed back directly by corporations from earnings because the focus in this bulletin is on funds going through the capital markets.

As will be noted, corporate bond financing showed peaks in 1948, 1952–53, and in 1957. Despite the cyclical pattern, an upward trend is evident. The net issues of corporate stocks show considerably more stability but seem to parallel the movement of corporate bonds.

FIGURE 16

Uses of Capital Funds in Corporate Financing, 1947-1957
(Billions of Dollars)

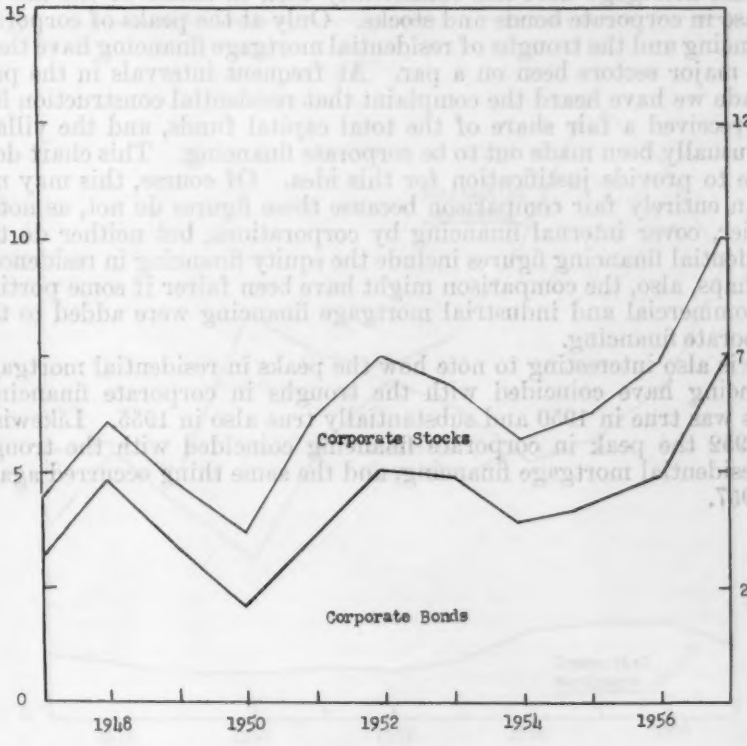


TABLE 95.—*Data for figure 16: Uses of capital funds in corporate financing, 1947–57*

[Billions of dollars]

Year	Corporate bonds	Corporate stocks	Total	Year	Corporate bonds	Corporate stocks	Total
1947	3.0	1.2	4.2	1953	4.8	1.9	6.7
1948	4.7	1.1	5.8	1954	3.8	1.8	5.6
1949	3.3	1.3	4.6	1955	4.2	1.9	6.1
1950	2.0	1.5	3.5	1956	4.8	2.4	7.2
1951	3.6	2.3	5.9	1957 [1]	7.5	2.7	10.1
1952	4.9	2.4	7.3				

[1] Preliminary.

NOTE.—Components may not add to totals because of rounding. Corporate stocks exclude issues of open-end investment companies.

The uses of capital funds in residential mortgages, commercial mortgages, and corporate securities

Figure 17 and table 96 draw upon data presented earlier. This chart is included because it shows clearly the interesting relationship between the residential mortgage market and the corporate bond market. One fact is clearly evident, that until 1957 the net increase of residential mortgage debt has consistently been in excess of the net increase in corporate bonds and stocks. Only at the peaks of corporate financing and the troughs of residential mortgage financing have these two major sectors been on a par. At frequent intervals in the past decade we have heard the complaint that residential construction has not received a fair share of the total capital funds, and the villain has usually been made out to be corporate financing. This chart does little to provide justification for this idea. Of course, this may not be an entirely fair comparison because these figures do not, as noted earlier, cover internal financing by corporations, but neither do the residential financing figures include the equity financing in residences. Perhaps, also, the comparison might have been fairer if some portion of commercial and industrial mortgage financing were added to the corporate financing.

It is also interesting to note how the peaks in residential mortgage financing have coincided with the troughs in corporate financing. This was true in 1950 and substantially true also in 1955. Likewise, in 1952 the peak in corporate financing coincided with the trough in residential mortgage financing, and the same thing occurred again in 1957.

FIGURE 17

Uses of Capital Funds in Residential Mortgages, Commercial Mortgages and Corporate Securities, 1947-1957
(Billions of Dollars)

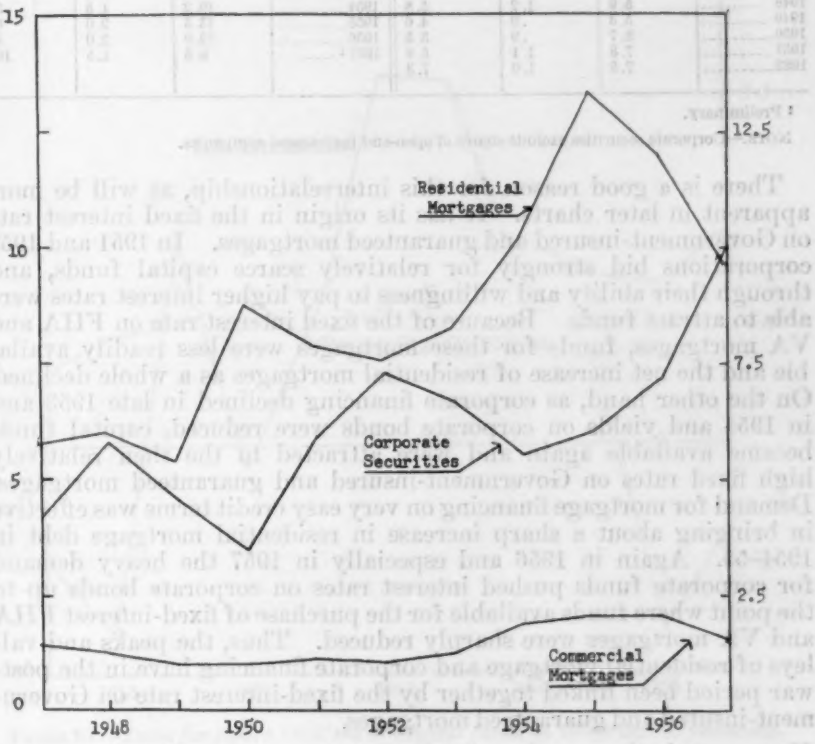


TABLE 96.—*Data for figure 17: Uses of capital funds in residential mortgages, commercial mortgages and corporate securities, 1947–57*

[Billions of dollars]

Year	Residential mortgages	Commercial mortgages	Corporate securities	Year	Residential mortgages	Commercial mortgages	Corporate securities
1947	5.7	1.3	4.2	1953	8.2	1.2	6.7
1948	5.9	1.2	5.8	1954	10.2	1.8	5.6
1949	5.3	.9	4.6	1955	13.3	2.0	6.1
1950	8.7	.9	3.5	1956	12.0	2.0	7.2
1951	7.8	1.1	5.9	1957 [1]	9.5	1.5	10.1
1952	7.5	1.0	7.3				

[1] Preliminary.

NOTE.—Corporate securities exclude shares of open-end investment companies.

There is a good reason for this interrelationship, as will be more apparent in later charts. It has its origin in the fixed interest rate on Government-insured and guaranteed mortgages. In 1951 and 1952 corporations bid strongly for relatively scarce capital funds, and through their ability and willingness to pay higher interest rates were able to attract funds. Because of the fixed interest rate on FHA and VA mortgages, funds for these mortgages were less readily available and the net increase of residential mortgages as a whole declined. On the other hand, as corporate financing declined in late 1953 and in 1954 and yields on corporate bonds were reduced, capital funds became available again and were attracted to the then relatively high fixed rates on Government-insured and guaranteed mortgages. Demand for mortgage financing on very easy credit terms was effective in bringing about a sharp increase in residential mortgage debt in 1954–55. Again in 1956 and especially in 1957 the heavy demand for corporate funds pushed interest rates on corporate bonds up to the point where funds available for the purchase of fixed-interest FHA and VA mortgages were sharply reduced. Thus, the peaks and valleys of residential mortgage and corporate financing have in the postwar period been linked together by the fixed-interest rate on Government-insured and guaranteed mortgages.

Movements in the uses of capital funds in Government financing

Another area of competition for residential mortgage financing is the use of capital funds to finance the Federal and State and local governments. Figure 18 and table 97 show the net uses of funds for these purposes. As indicated in table 97, the Federal Government reduced its outstanding debt in 1947, 1948, 1950, 1956, and 1957. As Federal debt is reduced, of course, funds are released to the capital markets. From 1951 through 1955, however, the net increase of Federal debt was a substantial factor on the demand side in the short and long-term credit markets.

The figures for State and local government financing show a rising trend so that they are today a substantial factor in the capital markets. It seems evident that the upward trend will continue and may accelerate.

FIGURE 18

Uses of Funds in Government Financing, 1947-1957
(Billions of Dollars)

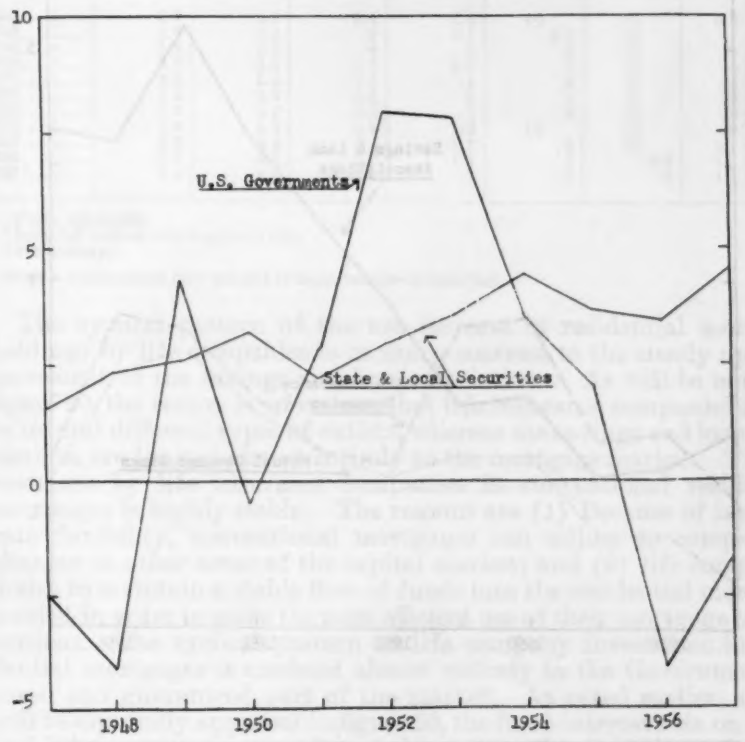


TABLE 97.—*Data for figure 18: Uses of capital funds in Government financing, 1947–57*

[Billions of dollars]

Year	U. S. Government	State and local securities	Year	U. S. Government	State and local securities
1947	−2.5	1.6	1953	7.8	3.6
1948	−4.1	2.3	1954	3.6	4.4
1949	4.3	2.6	1955	2.0	3.7
1950	−.5	3.2	1956	−4.1	3.4
1951	2.8	2.2	1957 [1]	−1.7	4.6
1952	7.9	2.9			

[1] Preliminary.

Trends in the sources of residential mortgage funds

Figure 19 and table 98 show the trends in residential mortgage financing by selected lending groups. The eye-catching figures are, of course, those of the savings and loan associations, where the net increase in residential mortgage holdings rose from $1.3 billion in 1949 to $5.2 billion in 1955, with a decline to $4.3 billion in 1957.

FIGURE 19

Sources of Residential Mortgage Funds, 1947-1957
(Billions of Dollars)

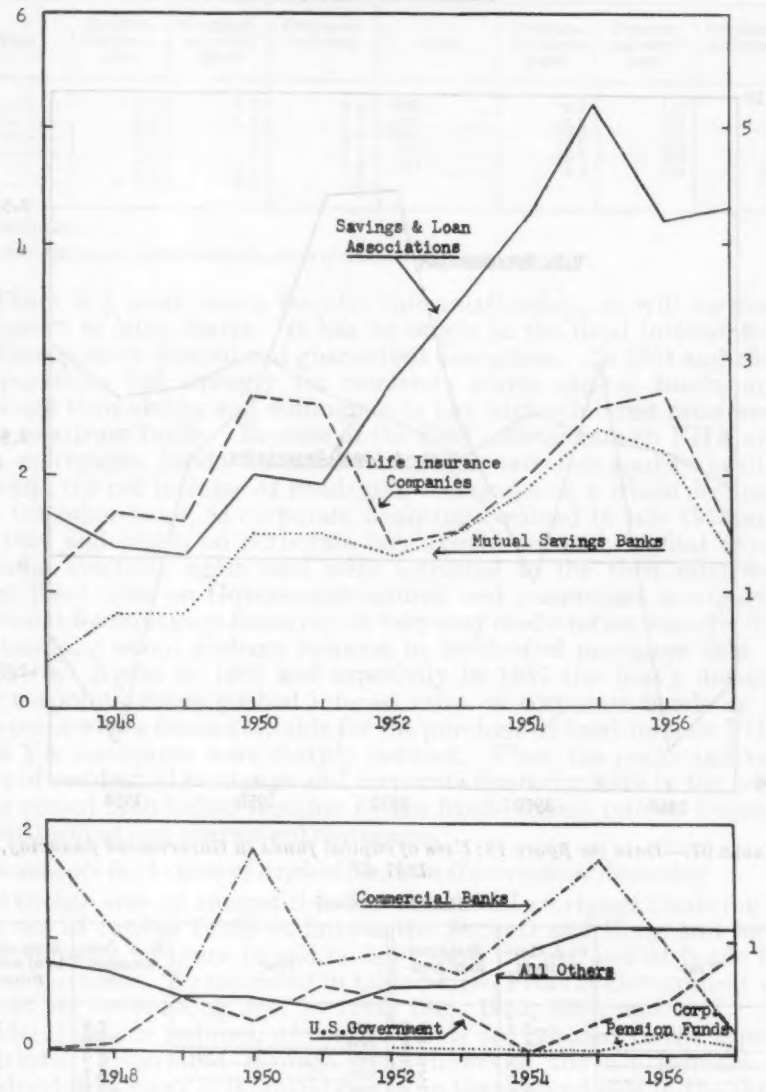


TABLE 98.—*Data for figure 19: Sources of residential mortgage funds, 1947–57*

[Billions of dollars]

Year	Life insurance companies	Savings and loan associations	Mutual savings banks	Commercial banks	United States Government	Corporate pension funds	All others	Total
1947	1.1	1.7	0.4	1.8	(1)	(2)	0.8	5.7
1948	1.7	1.4	.8	1.1	0.1	(2)	.7	5.9
1949	1.6	1.3	.8	.6	.5	(2)	.5	5.3
1950	2.7	2.0	1.5	1.8	.3	(2)	.6	8.7
1951	2.6	1.9	1.5	.8	.6	(2)	.4	7.8
1952	1.4	2.8	1.3	.9	.5	(1)	.6	7.5
1953	1.5	3.5	1.5	.7	.4	(1)	.6	8.2
1954	2.0	4.2	1.9	1.2	(1)	(1)	.9	10.2
1955	2.6	5.2	2.4	1.7	.3	(1)	1.1	13.3
1956	2.7	4.2	2.2	1.1	.5	0.2	1.1	12.0
1957 [3]	1.5	4.3	1.3	.2	.9	.1	1.1	9.5

[1] Under $50,000,000.
[2] Included with all others prior to 1952.
[3] Preliminary.

NOTE.—Components may not add to totals because of rounding.

The cyclical pattern of the net increase in residential mortgage holdings by life companies is in sharp contrast to the steady upward movement of the savings and loan associations. As will be noted in figure 20, the reason is, of course, that life insurance companies invest in several different types of outlets, whereas the savings and loan associations are limited almost entirely to the mortgage market. The investment by life insurance companies in conventional residential mortgages is highly stable. The reasons are (1) Because of interest-rate flexibility, conventional mortgages can adjust to competitive changes in other areas of the capital market; and (2) life companies desire to maintain a stable flow of funds into the residential mortgage market in order to make the most efficient use of their mortgage organizations. The cyclical pattern of life company investment in residential mortgages is confined almost entirely to the Government-insured and guaranteed part of the market. As noted earlier, and as will be especially apparent in figure 20, the fixed-interest rate on FHA and VA mortgages causes them to be unattractive in periods of rising demand for corporate funds.

FIGURE 20

Net Uses of Funds in Selected Investments of Life Insurance Companies, 1947-1957
(Billions of Dollars)

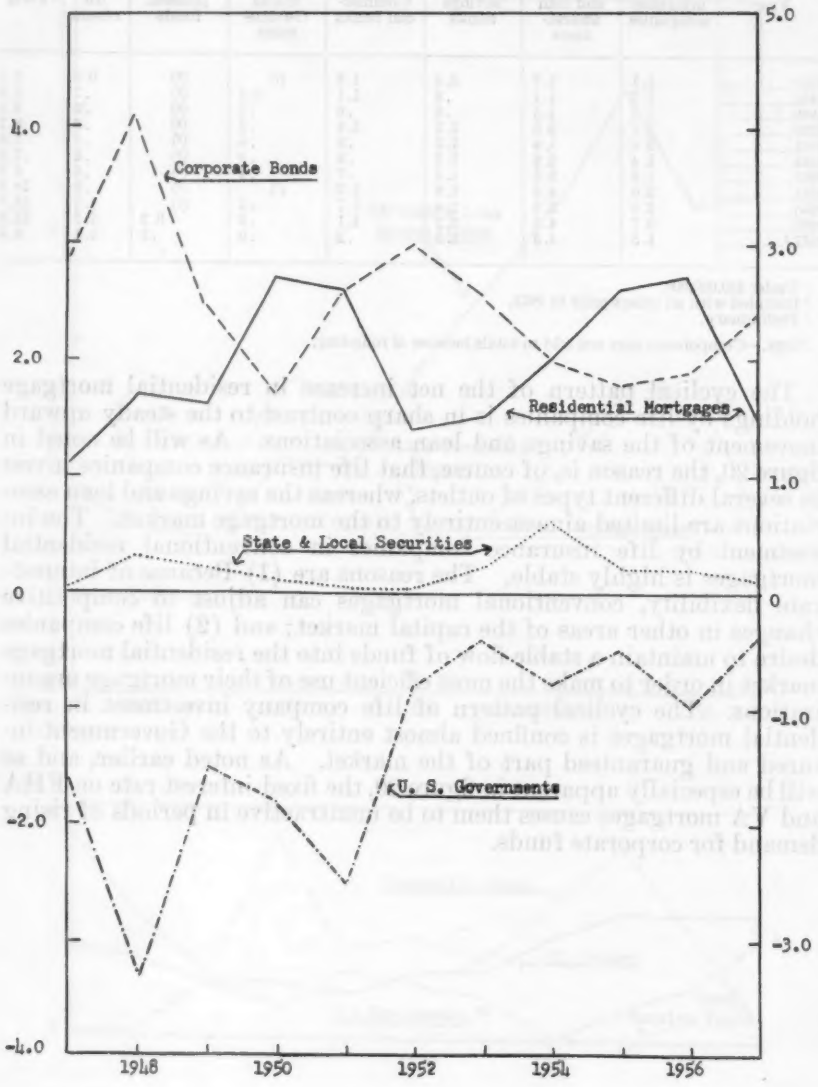


TABLE 99.—*Data for figure 20: Net uses of funds in selected investments of life insurance companies, 1947–57*

[Billions of dollars]

Year	Residential mortgages	Corporate bonds	United States Governments	State and local securities
1947	1.1	2.9	−1.6	(1)
1948	1.7	4.1	−3.3	0.3
1949	1.6	2.5	−1.5	.2
1950	2.7	1.7	−1.8	.1
1951	2.6	2.6	−2.5	(1)
1952	1.4	3.0	−.8	(1)
1953	1.5	2.6	−.4	.2
1954	2.0	2.0	−.8	.6
1955	2.6	1.8	−.5	.2
1956	2.7	1.9	−1.0	.2
1957 [2]	1.5	2.4	−.4	.1

[1] Under $50,000,000.
[2] Preliminary.

The same cyclical pattern is revealed in the case of the mutual savings banks, except it is not quite so pronounced. This would be expected on the basis that savings banks are much more committed by tradition to investment in mortgages. Figure 21 shows, however, that they do respond to comparatively more attractive rates on corporate bonds. This competition is perhaps less pronounced because savings banks do not as a rule purchase corporate bonds as direct placements where the rate inducements are likely to be greater than in the publicly offered corporate bond market.

Similarly, the commercial banks show the same cyclical pattern in their mortgage financing. The reason again is related to interest-rate flexibility versus rigidity, as will be considered in connection with figure 22.

Just a few more brief comments on figure 19. The figures for United States Government refer to residential mortgage purchases by FNMA and direct VA loans. The movement of these figures is keyed, of course, to Government support of the mortgage market at fixed interest rates at times in which private lending institutions are shifting funds to areas of the capital markets in which rates are competitively more in line with market forces.

The figures on residential mortgage investments by uninsured pension funds have been available for only a short time. They show the possible beginning of a movement into residential mortgages by these funds.

Net uses of capital funds in selected investments of life-insurance companies

Figure 20 and table 99, which show the net uses of capital funds in selected investments of life-insurance companies, provide further insight into the postwar capital markets. The lower panel of figure 20 indicates that in the years 1947 through 1957 the life-insurance companies reduced their holdings of United States Government securities on a net basis by $14.6 billion. The heaviest amounts were $3.3 billion in 1948 and $2.5 billion in 1951. Since the unpegging of the Government securities market in 1951 the annual amount of reduction has fallen to a lower level, and, in any event, United States Governments are now down to about 7 percent of total life-company assets.

Generally speaking, the relatively high level of life-company investments in the corporate bond and residential mortgage markets throughout the postwar period has been made possible by the reduction in holdings of Government securities. This is highly significant to the corporate bond and residential mortgage markets because it means that with holdings of Governments now at comparatively low levels the future contribution of life companies to these markets will be limited primarily to the net growth in funds.

Of significant interest is the relationship between the movement of net additions to residential mortgages and the movement of net additions to corporate bonds. The strong cyclical movement of each use of funds, and the correspondence between peaks in residential mortgage financing and troughs in corporate bond financing, is noteworthy. Likewise, it is interesting to observe the way peaks in corporate bond financing coincide with troughs in residential mortgage financing. The explanation is, of course, the sensitivity of investment policy by life companies, on the one hand, and the fixed-interest rate on FHA and VA mortgages, on the other. As noted in the discussion of figure 18, in a period of increasing demand for corporate funds, with interest rates rising, life insurance companies shift funds away from the fixed and less attractive rates on FHA and VA mortgages to the more attractive return on corporate bonds. In a period of decline in corporate financing, on the other hand, such as in late 1953 and in 1954 life company funds flow into the then attractive VA and FHA mortgages.

Trends in net uses of capital funds in selected investments of mutual-savings banks

Figure 21 and table 100 show the trends in selected investments of mutual-savings banks. The similarity to the life-insurance company pattern in the postwar period is apparent. Although the savings banks were slower to reduce their holdings of United States Government securities, they reduced these holdings by $4.2 billion in the period 1947–57, with the peak coming in 1951. The principal beneficiary was the residential mortgage market as the savings banks shifted the proceeds of the sale of Governments into higher yielding mortgages. In 1955 there was even a net disposal of corporate bonds in order to add to holdings of higher yielding mortgages.

FIGURE 21

Net Uses of Funds in Selected Investments of Mutual Savings Banks, 1947-1957
(Billions of Dollars)

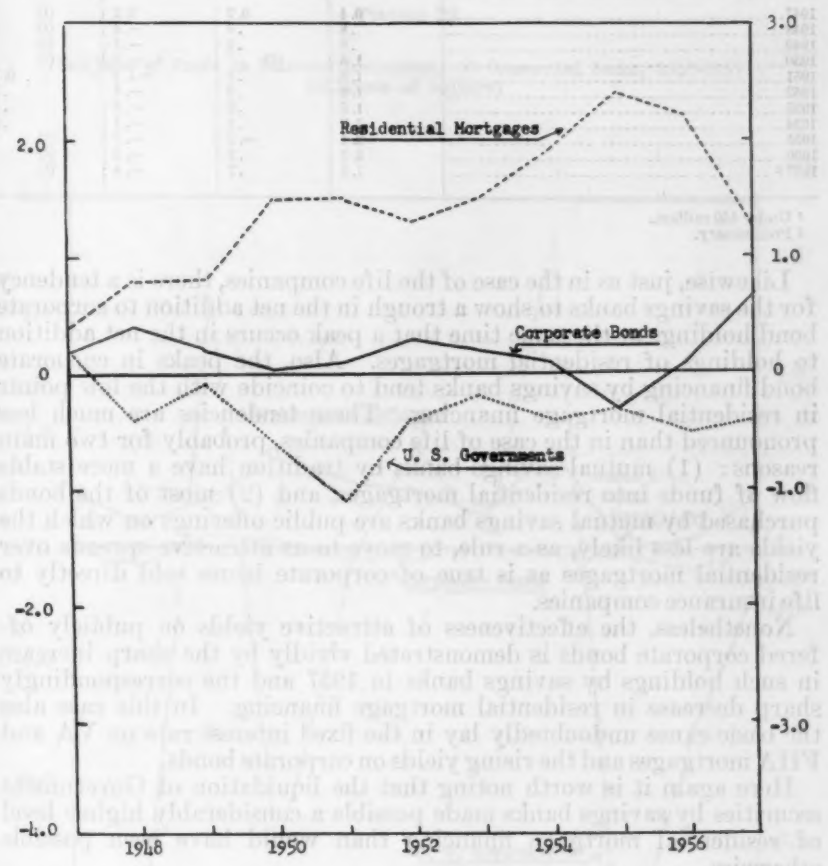


TABLE 100.—*Data for figure 21: Net uses of funds in selected investments of mutual savings banks, 1947–57*

[Billions of dollars]

Year	Residential mortgages	Corporate bonds	United States Governments	State and local securities
1947	0.4	0.2	0.2	(1)
1948	.8	.4	−.4	(1)
1949	.8	.2	−.1	(1)
1950	1.5	(1)	−.6	(1)
1951	1.5	.1	−1.1	0.1
1952	1.3	.3	−.4	.2
1953	1.5	.2	−.2	.1
1954	1.9	.1	−.4	.2
1955	2.4	−.3	−.3	(1)
1956	2.2	.1	−.5	(1)
1957 [2]	1.3	.7	−.4	(1)

[1] Under $50 million.
[2] Preliminary.

Likewise, just as in the case of the life companies, there is a tendency for the savings banks to show a trough in the net addition to corporate bond holdings at the same time that a peak occurs in the net addition to holdings of residential mortgages. Also, the peaks in corporate bond financing by savings banks tend to coincide with the low points in residential mortgage financing. These tendencies are much less pronounced than in the case of life companies, probably for two main reasons: (1) mutual savings banks by tradition have a more stable flow of funds into residential mortgages, and (2) most of the bonds purchased by mutual savings banks are public offerings on which the yields are less likely, as a rule, to move to as attractive spreads over residential mortgages as is true of corporate issues sold directly to life insurance companies.

Nonetheless, the effectiveness of attractive yields on publicly offered corporate bonds is demonstrated vividly by the sharp increase in such holdings by savings banks in 1957 and the correspondingly sharp decrease in residential mortgage financing. In this case also the basic cause undoubtedly lay in the fixed interest rate on VA and FHA mortgages and the rising yields on corporate bonds.

Here again it is worth noting that the liquidation of Government securities by savings banks made possible a considerably higher level of residential mortgage financing than would have been possible otherwise.

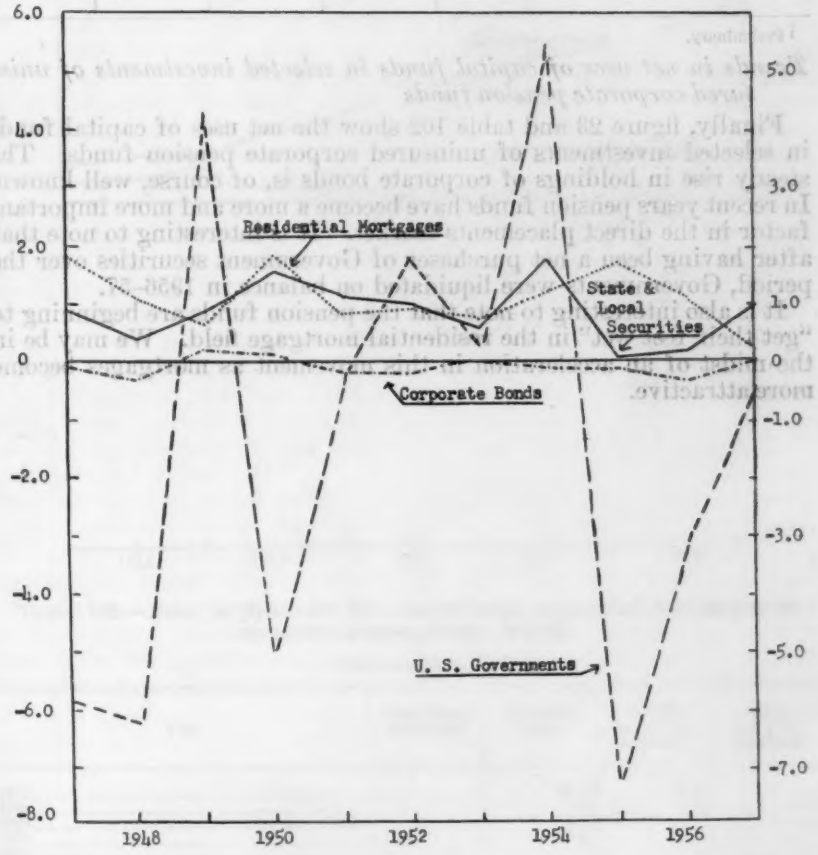
Trends in net uses of capital funds in selected investments of commercial banks

Because of the basically different nature of commercial banks, comment on figure 22 and table 101 will be brief. Here again, perhaps the most significant point to note is the cyclical movement in the net increase in holdings of residential mortgages. This chart does not show bank loans, and it is undoubtedly true that in periods of rising business and industrial demand for loans, at rising rates, commercial banks have shifted away from the fixed rates on Government-insured and guaranteed mortgages. The peaks of residential mortgage financing in 1950 and 1955 coincide with periods in which the huge demand for residential mortgage funds and the reduced demand for corporate financing made it natural for the commercial banks to be active in residential mortgages.

The peaks of net additions to holdings of Government securities in 1949 and 1954 are the product of easy money policy by the monetary authorities. With reserves available, the banks acquired Government securities. The periods of heavy reduction in holdings of Governments are occasioned by the need to raise funds to meet the rising demand for loans and mortgage financing.

FIGURE 22

Net Uses of Funds in Selected Investments of Commercial Banks, 1947-1957
(Billions of Dollars)



Note: Scale is one-half that used in Charts 9, 10 and 12.

TABLE 101.—*Data for figure 22: Net uses of funds in selected investments of commercial banks, 1947–57*

[Billions of dollars]

Year	Residential mortgages	Corporate bonds	United States Governments	State and local securities
1947	1.8	−0.1	−5.8	0.9
1948	1.1	−.3	−6.2	.4
1949	.6	.2	4.3	.9
1950	1.8	.1	−5.0	1.6
1951	.8	−.2	−.2	1.1
1952	.9	−.2	1.8	1.0
1953	.7		.3	.6
1954	1.2	−.1	5.5	1.8
1955	1.7	−.1	−7.2	.1
1956	1.1	−.3	−3.0	.2
1957 [1]	.2		−.3	1.0

[1] Preliminary.

Trends in net uses of capital funds in selected investments of uninsured corporate pension funds

Finally, figure 23 and table 102 show the net uses of capital funds in selected investments of uninsured corporate pension funds. The steady rise in holdings of corporate bonds is, of course, well known. In recent years pension funds have become a more and more important factor in the direct placements market. It is interesting to note that after having been a net purchaser of Government securities over the period, Governments were liquidated on balance in 1956–57.

It is also interesting to note that the pension funds are beginning to "get their feet wet" in the residential mortgage field. We may be in the midst of an acceleration in this movement as mortgages become more attractive.

FIGURE 23

Net Uses of Funds in Selected Investments of Corporate Pension Funds, 1947-1957
(Billions of Dollars)

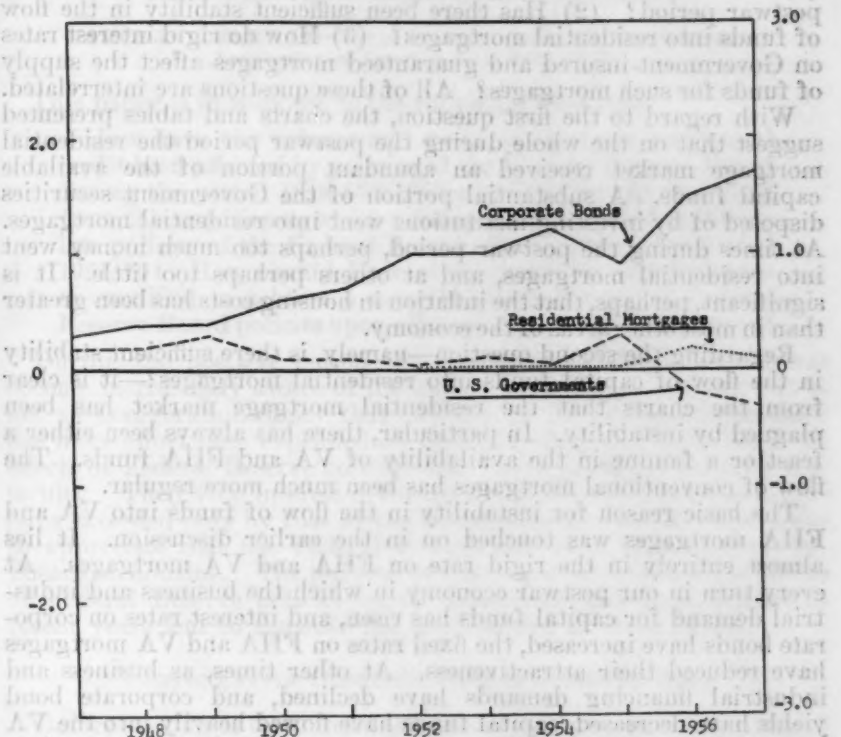


TABLE 102.—*Data for figure 23: Net uses of funds in selected investments of corporate pension funds, 1947–57*

[Billions of dollars]

Year	Residential mortgages	Corporate bonds	United States Governments	State and local securities
1947		$0.3	$0.2	
1948		.4	.2	
1949		.4	.3	
1950		.6	.1	
1951		.7	.1	
1952	(1)	1.0	(1)	
1953	(1)	1.0	.1	
1954	(1)	1.2	(1)	
1955	(1)	.9	.3	
1956	$0.2	1.5	−.2	
1957 [2]	.1	1.7	−.3	

[1] Under $50 million.
[2] Preliminary.

SOME QUESTIONS REGARDING THE FLOW OF CAPITAL FUNDS INTO RESIDENTIAL CONSTRUCTION, 1947–57

After having reviewed the various postwar trends in the capital markets, with particular reference to residential mortgage financing, it may be helpful in conclusion to consider three questions, as follows: (1) Has there been a shortage of funds for residential financing in the postwar period? (2) Has there been sufficient stability in the flow of funds into residential mortgages? (3) How do rigid interest rates on Government-insured and guaranteed mortgages affect the supply of funds for such mortgages? All of these questions are interrelated.

With regard to the first question, the charts and tables presented suggest that on the whole during the postwar period the residential mortgage market received an abundant portion of the available capital funds. A substantial portion of the Government securities disposed of by investing institutions went into residential mortgages. At times during the postwar period, perhaps too much money went into residential mortgages, and at others perhaps too little. It is significant, perhaps, that the inflation in housing costs has been greater than in most other areas of the economy.

Regarding the second question—namely, is there sufficient stability in the flow of capital funds into residential mortgages?—it is clear from the charts that the residential mortgage market has been plagued by instability. In particular, there has always been either a feast or a famine in the availability of VA and FHA funds. The flow of conventional mortgages has been much more regular.

The basic reason for instability in the flow of funds into VA and FHA mortgages was touched on in the earlier discussion. It lies almost entirely in the rigid rate on FHA and VA mortgages. At every turn in our postwar economy in which the business and industrial demand for capital funds has risen, and interest rates on corporate bonds have increased, the fixed rates on FHA and VA mortgages have reduced their attractiveness. At other times, as business and industrial financing demands have declined, and corporate bond yields have decreased, capital funds have flowed heavily into the VA and FHA mortgage field where rigid rates provided a new attractiveness for these mortgages. It seems clear that so long as interest rates in the Government-insured mortgage market are not free to reflect general capital market demand and supply conditions, we are bound to experience sharp cyclical ups and downs in the residential mortgage market.

THE EFFECTS OF MONETARY POLICIES ON THE RESIDENTIAL MORTGAGE MARKET

JAMES J. O'LEARY, Director of Economic Research, Life Insurance Association of America, New York, N. Y.

This paper is in response to the following questions:

How have the volume and price of nonfarm residential credit been affected by policies of the Federal Reserve Board during the period 1948–57? What principles can be drawn from this experience, which principles may be used to formulate policies of the Federal Reserve Board during the period 1961–70? How should Federal programs be supplemented or modified to achieve a more balanced impact of Federal Reserve Board policies upon all major sectors of the economy?

During the postwar period the real-estate-mortgage market has become increasingly aware of the impact of monetary policies. It is not an exaggeration to say that nowhere in the business community has more effort been expended on understanding and appraising the effects of Federal Reserve policies than in the mortgage banking fraternity. Their vital interest in the impact of monetary policies is perhaps exceeded only by that of the homebuilders, who have also come to appreciate that the Federal Reserve can exert an important influence on housing. The purpose of this paper is to review the effects of Federal Reserve policies on the residential mortgage market in recent years and to consider the implications of these effects.

COMPONENTS OF THE RESIDENTIAL MORTGAGE MARKET

Before turning to the impact of monetary policies on the residential mortgage market, it will be helpful to distinguish between several component parts of the market. This is because the impact of monetary policies falls somewhat differently upon these parts. First, it is useful to distinguish between Government insured and guaranteed mortgages, on the one hand, and conventional mortgages, on the other. For the purposes of this paper, the basic distinction is that the interest rate on Government insured and guaranteed mortgages is a regulated rate. Whatever yield-flexibility exists for investors in this area comes about through discounts or premiums. Because of the regulated rate, this sector of the capital market is vitally affected by changes in overall capital market conditions. On the other hand, the interest rate on conventional residential mortgage loans, although sluggish in movement, is free to reflect and respond to capital-market changes. Other important differences are that the Government insured and guaranteed mortgages are characteristically low-down-payment, long-amortization-period mortgages, whereas State law and custom place the conventional loans characteristically on a much

higher-down-payment and a shorter-amortization basis. There is also, of course, the Government insurance or guaranty in the one case and the absence of it in the other.

SOME IMPORTANT CHARACTERISTICS OF RESIDENTIAL MORTGAGE FINANCING

Before proceeding with a discussion of the impact of monetary policies upon the residential mortgage market, it will be helpful to consider briefly certain characteristics of the market which have an important bearing upon the impact of monetary policies. Of primary significance is the fact that mortgage financing is characterized by the forward-commitment procedure. This means, for example, that a residential builder, prior to obtaining construction financing from a commercial bank, seeks a commitment for permanent financing from an investor such as a life insurance company or a mutual savings bank. Terms of the financing are specified in the forward commitment. The forward commitment is thus an essential and indispensable part of the financing process.

The forward-commitment process is particularly important in the case of new construction because of the time lag involved. A forward commitment made by an investor in April, let us say, on credit terms prevailing in April may finally result in the actual delivery of the mortgage and disbursement of funds in November. The lag, of course, is related to the period of construction, but it may be considerably longer. Another way to view the forward-commitment process is that in a period of relatively easy credit and reduced construction activity a large volume of forward commitments may be built up, resulting in heavy construction activity at a later time. As will be developed in this paper, the forward-commitment process renders it exceedingly difficult for the monetary authorities to time the effect of their policies upon construction expenditures.

A REVIEW OF RECENT HISTORY OF THE IMPACT OF MONETARY POLICIES ON THE MORTGAGE MARKET

The most fruitful way to analyze the impact of monetary policies upon the real estate mortgage market is to review the history of these effects in recent years. For this purpose the period from mid-1950 has been chosen because it carries through the experience with direct controls under regulation X, as well as through the experience under general credit controls.

The experience with regulation X

It will be recalled that when the Korean war broke out in mid-1950 we were in the early stages of a boom in our economy which was spearheaded by the sharp rise in residential construction. At that time the Federal Reserve was still supporting the prices of Government securities at above par. As the demand for residential mortgage credit (especially Government insured and guaranteed credit) grew, there was an open invitation to institutional investors to extend forward commitments to purchase mortgages on the assumption that, if necessary, the cash required to disburse these loans could be raised by the sale of Government securities. The significant point is that at this time institutional investors had little need to relate their forward

commitments to their cash flow; a large portfolio of readily salable Government securities at pegged prices made it certain that cash could be raised to meet commitments almost regardless of how high these commitments became.

It was in this climate that the Defense Production Act was passed in August 1950, one section of which authorized the Federal Reserve Board at the President's direction to undertake control of the terms of Government insured and guaranteed mortgages. The act stipulated that, before deciding upon the exact form of the controls, the Federal Reserve must consult with industry advisory groups. Promptly after passage of the act the Federal Reserve was directed to place the controls in effect, and a series of meetings was held with advisory groups representing the homebuilders, the various lending institutions, and others.

These meetings, which extended over several weeks, were essential to the drafting of an intelligent regulation in the highly complicated field of residential mortgage credit. Regulation X, which was placed in effect in October, covered virgin territory and was drawn only after an expert group brought together by the Federal Reserve had given the matter very careful consideration. Unavoidably, however, these conferences gave the mortgage market a clear insight into the general nature of the regulation as it was in the formulation stage. When it was ultimately announced, about the only thing the market did not know in advance was the actual downpayment and amortization terms.

Given the nature of the residential mortgage market and the pegs on Government securities, the result was preordained. An exceedingly heavy volume of forward commitments on preregulation X terms had been built up prior to the effective date of the regulation. The size of this backlog of commitments is not known definitely, but there is general agreement that a major part of residential construction put in place during the life of regulation X was financed on preregulation terms on the basis of the advance commitments. Indeed, it is generally agreed that, because of the commitment backlog, regulation X was barely starting to be effective with regard to construction at the time that it was decided, in the spring of 1952, that the regulation was no longer needed.

It is difficult to escape the conclusion that regulation X had little value as a means for promptly bringing under control the sharp increase in expenditures for residential construction in the critical year following its enactment. This is in spite of the fact that the regulation was carefully and expertly administered. The question may be raised, however, as to whether this means that direct credit controls will always be ineffective in the housing field. Was not the failure of regulation X largely the product of the conditions existing at the time, namely, the willingness and ability of financial institutions to make a large volume of forward commitments, along with the requirement for extensive consultation with industry advisory groups, which stimulated advance commitments? Was it not also the product of the pegged Government securities market which made possible the buildup of a large backlog of commitments? Undoubtedly, the failure of regulation X can be attributed to the circumstances of the time, but it is likewise true that, regardless of how direct controls of mortgage credit are instituted at some future date, they are likely to experience

similar frustrations. The residential mortgage market is a constantly changing one. This means that regulation X cannot be merely dusted off in some new emergency; it would always have to be subjected to study by industry advisory groups, and the possibility of sharp build-ups in commitments would always exist. This drawback is entirely aside from the principal shortcoming of direct controls such as regulation X, namely, the great difficulty of enforcement. The residential-mortgage business is ingenious in discovering new ways to operate, and the enforcement of downpayment and other terms would always be exceedingly difficult.[1]

The impact of general credit controls on the mortgage market in 1952 and the first half of 1953

Turning now to the impact of general credit controls on the mortgage market, the first period to be reviewed is the period covering 1952 through the first half of 1953. Before considering this period, however, it is worth pointing out that general credit controls are assumed to operate through regulating the availability of credit and thus affecting investment yields and the prices of assets. Implicit in the theoretical framework of the functioning of general credit controls is the assumption of perfect competition in the long- and short-term credit markets and of flexibility and sensitivity of interest rates. As will be stressed in the ensuing discussion, the insensitivity of interest rates on Government insured and guaranteed mortgages does much to explain the particular impact which monetary policies have had on the mortgage market.

The pronounced rise in housing in 1950 was followed in 1951 by the development of an upturn in business and industrial expansion, especially in the latter part of the year. The result of this heavy draft by business and industry on capital funds was a steady rise in 1951 in interest rates on the securities of business and industry, where rates are highly sensitive to competitive market forces. Although rates remained fairly stable in 1952, they were still under pressure of demand. This industrial and utility demand for funds accelerated in the first half of 1953. As interest rates rose on corporate bonds and on the securities and mortgages of business and industry generally in the latter part of 1952 and in the first part of 1953, the fixed rate of 4 percent on VA mortgages and 4¼ percent on FHA mortgages became less and less attractive to investors. As a result, institutional investors reacted to this situation by further reducing their flow of funds into FHA and VA mortgages, and even on the greatly reduced volume of new commitments they insisted upon higher down payment and shorter amortization periods, as well as a better quality of credit in all respects. It might be wondered why the deepening of discounts on Government-insured and guaranteed mortgages could not have maintained the competitive position, yieldwise, of these mortgages. The answer is that at this time there was serious doubt that discounts on VA mortgages were legal. Moreover, the ease of public misunderstanding of discounts discouraged this practice with many responsible investors.

[1] In addition to regulation X, the FHA has had power to vary credit terms on FHA loans within prescribed maximums; because of the greater freedom to act promptly without advance notice, this form of direct control has been somewhat more useful.

There is little doubt that, as the pressures on the supply of credit developed in 1952 and into 1953, the restrictive monetary policy played an important role in the shift of investors away from the Government-insured and guaranteed mortgage market. If the Federal Reserve had not pursued a restrictive credit policy, it is unlikely that the flexible and sensitive interest rates would have risen so sharply. Or, put another way, if the Federal Reserve had been willing to maintain easy credit, the sensitive rates would not have risen so much, and more funds would probably have been available for Government-insured and guaranteed mortgages. The fact is, of course, that under the circumstances a failure by the Federal Reserve to restrict credit would have reinforced the inflationary forces already at work because of the heavy pressure of capital demand upon the limited supply of savings. The restrictive credit policy was, therefore, distinctly in the general public interest.

It should also be made clear that, as the flow of funds into FHA and VA mortgages was reduced, not all the shift was into the securities of business and industry. Rather, a large proportion of the remaining flow of residential mortgage money took the route of conventional residential mortgages, where rates were more flexible and responsive to market forces. Consistently throughout the postwar period the flow of conventional mortgage loans has shown great stability because of flexible interest rates. In addition, an increased flow of funds was directed into conventional mortgages on commercial and industrial properties. Thus not only was there a reduction of the overall flow of funds into mortgages in favor of bonds, but the funds remaining for mortgages were directed more heavily into conventional residential and business mortgages, where the rates are responsive to market forces.

In the spring of 1953, as a result of the forces already outlined—namely, the heavy overall demand for capital funds relative to the supply of savings and the restrictive monetary policy—there developed an acute shortage of Government-insured and guaranteed credit at rigid interest rates. This situation was made even more difficult from the viewpoint of the home-building industry by the Treasury issue of 3¼ percent bonds at that time, which attracted some funds from the mortgage market and contributed to a further rise in flexible long-term interest rates at the expense of the fixed VA–FHA rates. As noted earlier, the heavy discounts on Government-guaranteed mortgages did not help the situation appreciably because of the questionable legality of the discounts and the possible adverse public relations involved in purchasing these mortgages at a discount.

Under these circumstances it is not surprising that great pressures arose in the spring of 1953 for a greatly increased volume of purchases of VA mortgages by the Federal National Mortgage Association. Likewise, the volume of direct loans by the VA to veterans rose. Since FNMA debentures and Government securities issues to finance the direct VA lending were sold mainly to commercial banks, both of these programs brought commercial bank credit into the VA mortgage market and thus acted to negate Federal Reserve policy in this field.

Late in the spring of 1953 a swift succession of events took place which completely altered the mortgage credit situation. First, the

VA increased the rate on VA loans from 4 to 4½ percent, and the FHA rate was also raised from 4¼ to 4½ percent. The purpose was, of course, to bring these rates back into line with competitive rates in other sectors of the capital market. At the same time, there was clarification in the law removing the fear that discounts on VA mortgages would be considered illegal. This action was taken in the midst of growing signs that a business recession was developing. There followed in late spring, as a result, the sudden shift of Federal Reserve policy from one of credit restraint to one of greater ease. The outcome of this change in policy, plus the reduced demand for capital funds by business and industry, was a sharp drop in interest rates on industrial and public utility securities, as well as on Government securities.

The impact of monetary policies on the mortgage market in the second half of 1953 and through 1954

It will be recalled that, after changing the direction of monetary policy in the spring of 1953, the Federal Reserve moved by a succession of steps in subsequent months to "active ease." Along with the decline in demand for capital funds by business and industry, this policy contributed to a marked drop in the sensitive and flexible interest rates throughout the capital market. The decline was pronounced in the case of corporate bonds and somewhat less marked in the case of conventional mortgages, both residential and busines mortgages. In a matter of weeks, or as early as June 1953, the status of VA and FHA mortgages changed abruptly. Instead of being a drug on the market, they suddenly became most attractive at a gross interest rate of 4½ percent and a net return after costs of about 3¾ percent. As might have been expected, therefore, institutional investors promptly expanded their VA and FHA commitments in the second half of 1953. This is shown by the fact that new commitments by institutional investors to make VA loans, in particular, rose most sharply at an accelerating pace in that period.

During the second half of 1953 the major effect of monetary policy seems to have been a prompt and pronounced increase in the availability of VA and FHA mortgage funds. As already noted, of course, the reduced demand for funds in the business and industrial sector also placed a large part in this development. It might have been expected that, as the flow of funds into Government-insured and guaranteed mortgages increased, there would be a corresponding softening of interest rates in this area. Actually, throughout the second half of 1953 there was little change in the prices of Government-insured and guaranteed mortgages at the 4½-percent rate. The answer seems to have been that a large backlog of deferred demand for VA and FHA mortgage credit had been built up in the period of restraint. This deferred demand absorbed the accelerated flow of funds, with the easing which occurred taking the form of a gradual liberalization of other terms than interest rate.

By early spring of 1954 the relative attractiveness of VA and FHA mortgage yields had become so great that a virtual deluge of funds flowed into this sector of the capital market. In order to put these funds to work, the market moved into 30-year no-downpayment financing, which soon became "no-no downpayment" financing, with builders resorting to prizes and other "giveaway" schemes in order

to sell houses. The outcome was a huge buildup of forward commitments to make VA and FHA mortgage loans, especially the former. The very easy credit terms succeeded in stimulating the demand for VA and FHA credit. The ease, however, was primarily in credit terms other than interest rate, which remained quite firm throughout the period. The contract rate was held at 4½ percent. The huge buildup of VA and FHA commitments made necessary the increased warehousing of mortgages with commercial banks by many institutional investors and loan correspondents in late 1954 and in 1955. This brought commercial bank credit into the mortgage market and became an increasing source of concern to the Federal Reserve authorities.

The impact of monetary policies on the mortgage market in the period 1955–57

The housing boom which began to develop in 1954 reached its peak in 1955. It was based, of course, on the forward commitments made in the second half of 1953 and in 1954. By the end of 1954, however, a slowdown of new commitments to purchase VA and FHA mortgages had already become evident. The declining rate accelerated in 1955. The main reasons for this development are twofold. (1) Many institutional investors were persuaded that, in view of the large buildup of commitments and the prospective acquisition of VA and FHA mortgages, a slowdown in new commitments would be advisable from the viewpoint of portfolio balance; (2) as a result of the housing boom and other forces, business and industry began to set new targets for expansion, and business and industrial capital demand started to move upward. The natural result was, of course, a rise in the yields of the securities of business and industry.

As the business and industrial demand for capital funds began to develop in 1955 on top of the housing boom, the Federal Reserve authorities were required to move into a policy of credit restraint, and this policy acted to accelerate the rise of sensitive interest rates. Early in 1955, therefore, a familiar pattern once again emerged in the mortgage market. In addition to a declining rate of new commitments by investors to purchase VA and FHA mortgages, the credit terms were tightened by investors on the new commitments. More and more emphasis was placed on conventional residential and business mortgages, where rates were sensitive to capital-market changes. Above all, early in 1955 a shift in the flow of funds to industrial and public securities got underway.

This pattern became much clearer in 1956 and 1957 as the rise in business and industrial plant and equipment spending went forward. Rising interest rates in the sensitive areas of the capital market made the rigid rates on VA and FHA mortgages less and less attractive, and new commitments in that area declined steadily to very low levels. Concomitantly, increasingly large discounts were quoted on VA and FHA mortgages, but the availability of funds continued to decline in spite of the discounts because of the unwillingness of most institutional investors to purchase on a heavy-discount basis. Contributing to this situation, of course, was the restrictive credit policy of the Federal Reserve, which reinforced natural market forces leading to rise in the more sensitive interest rates in the industrial and public utility financing field.

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The outcome of this situation was a reduced volume of housing starts in 1956–57, with a larger and larger proportion being financed on a conventional basis. Although the interest rate on FHA mortgages was raised in stages to the present level of 5¼ percent in order to attract funds, the increases proved to be too little and too late to encourage much of an increase in funds in the face of highly attractive rates on business and industrial securities and mortgages.

The impact of monetary policies on the mortgage market—1958

By autumn of 1957, it had become clear that a general business recession was underway, and as a result the monetary authorities began in mid-November to ease credit. Through a series of cuts in the Federal Reserve discount rate, and through facilitating a buildup in the "free reserves" of commercial banks, the monetary authorities had by the summer of this year introduced a large measure of ease into the money market. The action of the authorities was reinforced by a decline in plant and equipment expenditures by business and industry as general business conditions receded. From mid-November 1957 through the first several weeks of this year, interest rates on corporate bonds declined sharply. As a result, based on the expectation that yields on corporate bonds would decline throughout 1958, institutional investors directed more of their funds into residential mortgages. During the first 4 or 5 months, there was a significant buildup of residential mortgage commitments, many for Government insured and guaranteed mortgages. The result was that in the first half of 1958 the seasonally adjusted rate of private housing starts accelerated.

However, beginning in June a sharp rise in interest rates got under way. This was the product of a number of forces. Basically, it took place because of the heavy demand for long-term capital from business and industry (despite the recession) plus the demand on the part of State and local government units. Another factor contributing to the pushing up of interest rates in recent months was the sale of a moderate amount of long-term Government bonds by the United States Treasury. Still another factor is the inflationary psychology which is abroad these days, which has undoubtedly led to an inflation premium in interest rates—that is, a premium to compensate for an expected decline in the value of the dollar. A final reason for the rise in interest rates in the past several weeks was the reversal again of monetary policy since last August toward credit restraint as the Federal Reserve became more and more concerned about a resurgence of inflationary forces. As flexible interest rates have risen, we are again witnessing a reduction in the attractiveness of Government insured and guaranteed mortgages with investors. This is, of course, because of the fixed interest rates on such mortgages.

CONCLUSIONS

The conclusions reached in this paper regarding the impact of monetary policies on the residential mortgage market are as follows:

1. There can be little doubt that during the past several years monetary policies have had a highly significant impact upon the residential mortgage market. At times monetary policies have provided a stimulus to the mortgage market and at others have exerted a drag on it.

It is important to recognize, however, that basic changes in the demand for and supply of capital funds were the controlling influence in the mortgage market and that monetary policies had more marginal yet highly significant effects.

2. The experience with regulation X showed that direct controls are an inherently unsatisfactory device for controlling residential mortgage credit. Because of the need for advance consultation with industry advisory groups and the tendency for a buildup of forward commitments to take place, it is questionable whether this type of control could ever be made effective. This is to say nothing of the difficulty of enforcement. What is said here about regulation X does not necessarily apply to the form of direct control under which FHA has the power to alter its credit terms within the limits of prescribed maximums.

3. With regard to the impact of general credit controls on the mortgage market, a number of conclusions emerge. Because of the fixed rate on Government insured and guaranteed mortgages and the ineffectiveness of discounts or premiums as a device for providing yield flexibility, a restrictive credit policy has usually contributed to a famine of Government insured and guaranteed credit, and an easy credit policy has usually contributed to a feast in this market. There has been a tendency by some to argue that this is in the public good because residential construction automatically becomes reduced in a period of industrial expansion and is stimulated in a period of declining capital spending by business and industry. It can also be argued however, that the effect of monetary policy upon the Government insured and guaranteed mortgage market is open to question on equity grounds and grounds of social priorities.

One conclusion which is clear is that general credit controls, as administered by the Federal Reserve authorities, will never function smoothly and impersonally in the residential mortgage field until the interest rate on Government insured and guaranteed mortgages is permitted to move freely and flexibly in response to capital-market forces. There is much merit to the suggestion that the FHA rate, for example, be free to reflect fully the overall market forces. This freedom could be granted under the present statutory maximum of 6 percent. Unless Government insured and guaranteed rates are free to react promptly to market forces, it must be expected that general credit policy will be greatly handicapped in the mortgage-credit field.

Under the situation which has existed, there is inevitably great pressure on Government to see that credit is available to the VA or FHA market at the pegged rates through some device such as the expansion of FNMA's purchases, direct Government loans, or the use of some fund such as the national service life insurance fund to purchase Government guaranteed mortgages. Too often, of course, resort to expediencies such as these have run at cross-purposes with the Federal Reserve actions and have greatly weakened the influence of monetary policy. This is to say nothing about the problem of coordinating Federal Reserve policy with the credit-granting power of the Home Loan Bank System or the power that the FHA has over credit terms.

Accordingly, the most important step to be taken in order to obtain regularity in the flow of private funds into Government-insured mortgages is to free the interest rate on such mortgages.

THE IMPACT OF MONETARY POLICY ON RESIDENTIAL CONSTRUCTION, 1948–58

WARREN L. SMITH, University of Michigan and Harvard University

This paper was prepared in response to the questions:

> How have the volume and price of nonfarm residential credit been affected by policies of the Federal Reserve Board during the period 1948–57? What principles can be drawn from this experience, which principles may be used to formula policies of the Federal Reserve Board during the period 1961–70? How should Federal programs be supplemented or modified to achieve a more balanced impact of Federal Reserve Board policies upon all major sectors of the economy?

I. INTRODUCTION

Residential construction has been sustained at very high levels since the end of World War II. In the decade 1948–57, 11 million private nonfarm dwelling units were started, an average of 1.1 million per year. This is substantially higher than the levels of construction reached during the housing boom of the 1920's, although, of course, the level of total national output has also been substantially higher than in the earlier period.

While the level of housing construction has, in general, been high, by past standards, it has also exhibited very substantial fluctuations from year to year, as can be seen in table 103. For example, housing starts increased by 37 percent from 1949 to 1950, dropped by 25 percent from 1950 to 1951, rose by 13 percent from 1953 to 1954 and by a further 9 percent from 1954 to 1955, and fell by 17 percent from 1955 to 1956. The volume of residential construction valued at constant prices has behaved in much the same way as housing starts, although the fluctuations have, for the most part, been less severe. It is interesting to note that, in 1957, housing starts were only 9 percent higher than in 1948, whereas total outlays at constant prices were 36 percent higher, an indication of a substantial upgrading in the size and quality of houses built.[1] The prices of new houses, as measured by the Department of Commerce implicit price deflator for residential nonfarm construction, rose by 24 percent, or only slightly more than the rise (22 percent) in gross national product prices generally. In real terms, residential nonfarm construction varied between approximately 3½ and 5 percent of gross national product, a further indication of substantial fluctuation.

[1] Valued at 1954 prices, outlays per start increased from $12,500 in 1948 to $15,600 in 1957, a rise of about 25 percent. The data of the HHFA on number of rooms, floorspace, and proportion of houses with garages for new houses covered by mortgages insured under sec. 203 of the National Housing Act corroborate this upgrading trend. See HHFA annual reports, 1948–56.

TABLE 103.—*Data relating to residential construction, 1948–58*

Year	Privately owned nonfarm dwelling units started (thousands)	Residential nonfarm construction (billions of 1954 dollars)	Residential nonfarm construction as percent of GNP	Total new construction [1] (billions of 1954 dollars)
1948	914	11.4	3.9	27.0
1949	989	11.2	3.8	28.7
1950	1,352	15.5	4.9	33.9
1951	1,020	12.9	3.8	34.4
1952	1,069	12.8	3.6	35.3
1953	1,068	13.6	3.7	37.1
1954	1,202	15.4	4.2	39.6
1955	1,310	18.2	4.6	43.2
1956	1,094	16.4	4.1	42.5
1957	993	15.5	3.8	43.0
1958	[2] 994	[3] 15.5	3.9	[4] 45.2

[1] Total value of new construction, private and public, deflated by implicit price deflator for new construction component of GNP.
[2] Seasonally adjusted annual rate for first 6 months.
[3] Seasonally adjusted annual rate for first 2 quarters, deflated by average of consumers' and wholesale price indexes.
[4] Seasonally adjusted annual rate for first 9 months deflated by average of consumers' and wholesale price indexes.

Sources: HHFA, Annual Reports; Housing Statistics; Survey of Current Business; Federal Reserve Bulletin.

Total outlays for new construction do not show the same instability as the residential component. In fact, total construction rose each year except for slight decline from 1955 to 1956. Residential construction seems to have followed, in a general way at least, a somewhat contracyclical pattern. In the downturns of 1949 and 1953–54, housing starts picked up and the momentum thus generated carried over in the form of very high levels of construction in 1950 and 1955. As inflationary pressures developed, the measures taken to counteract these pressures produced cutbacks in residential construction in 1951–52 and in 1956–57. However, both the forces producing the initial expansion and the means by which restrictive policies produced a cutback were different in the 1949–52 period and in the 1954–57 period, as we shall see.

Since our main interest is in the effects of monetary and financial forces on residential construction, we shall divide the period from 1948 to 1958 into 3 subperiods in which these forces worked in different ways and through different channels. First, we shall consider the period 1948–50, before the Treasury and Federal Reserve arrived at the accord of March 1951. Next, we shall take up the period 1951–52, when a moderately active monetary policy was employed while at the same time the mortgage market was subjected to the selective controls imposed after the outbreak of the Korean war. Finally, we shall turn to the period since 1953, during which the Federal Reserve has used its general monetary controls rather vigorously and these controls have exerted considerable effects on residential construction.

II. THE PREACCORD PERIOD: 1948–50

Expenditures on residential construction are influenced by many factors in addition to the cost and availability of credit.[2] Table 104 summarizes what seem to be the more important of these factors for the years 1948–57. It seems apparent that they had much to do with the rapid expansion of residential construction between 1948 and 1950, culminating in the record total of 1.35 million housing starts in the latter year. Household formation was proceeding at a very rapid pace during these 3 years, reaching a peak in 1950, after which it declined rather sharply. Although the number of doubled-up families declined between 1948 and 1950, it was still in excess of 2 million in the latter year. Real per capita disposable income at 1954 prices, increased by nearly $100 or about 6 percent in 1950, the largest year-to-year increase of the postwar period to date. And finally liquid asset holdings were large and widely distributed during the period 1948–50.

TABLE 104.—*Factors affecting demand for housing accommodation, 1948–57*

Year	Nonfarm households formed (thousands)	Married couples without own households (thousands)	Per capita disposable personal income (1954 dollars)	Percent of spending units having liquid assets	Median holding of liquid assets (1954 dollars)[1]
1948	1,443	2,464	1,418	73	930
1949	1,571	2,168	1,413	71	920
1950	1,592	2,016	1,508	69	890
1951	1,308	1,758	1,506	72	730
1952	967	1,558	1,519	69	720
1953	949	1,546	1,564	71	780
1954	896	1,471	1,556	74	770
1955	844	1,304	1,629	71	740
1956	893	1,263	1,677	72	740
1957	1,189	1,229	1,665	76	750

[1] Median holding of liquid assets of families having some liquid assets, as shown by Survey of Consumer Finances, deflated by the implicit price deflator for residential nonfarm construction.

Sources: HHFA Annual Report, 1956; Survey of Current Business; Federal Reserve Bulletin; U. S. Bureau of the Census.

Thus, forces other than the cost and availability of mortgage credit seem capable of accounting for the rapid expansion of residential construction during this period. However, changes in the mortgage market were a contributory factor also. In part, these changes were the result of amendments to Federal housing legislation. The Housing Act of 1948 approved in August of that year, contributed significantly to the expansion of the housing market by raising the limits on the size, and increasing permissible maturities of mortgages insured by the FHA.[3] The Housing Act of 1950, adopted in April, eased

[2] Systematic discussions of the factors influencing the housing and mortgage markets are to be found in J. S. Duesenberry, Business Cycles and Economic Growth (New York, 1958), ch. 7; D. M. Blank and L. Winnick, The Structure of the Housing Market, Quarterly Journal of Economics, LXVII, May 1953, pp. 181–208; L. J. Atkinson, The Housing Market, Survey of Current Business, May 1955, pp. 13–19; L. R. Klein, Economic Fluctuations in the United States, 1921–41 (New York, 1950), pp. 89–95, 130–132; and J. E. Morton, Urban Mortgage Lending: Comparative Markets and Experience (Princeton, 1956).

[3] The 1948 act increased the maximum amount of a 90 percent FHA-insured mortgage from $5,400 to $6,300 and the maximum amount of a 90–80 percent mortgage from $8,600 to $9,500 (90 percent of the first $7,000 of appraised value and 80 percent of the remainder up to $11,000) and increased the maximum mortgage eligible for a 25-year maturity from $5,400 to $16,000. A new subsection was added authorizing mortgages up to 95 percent of appraised value and 30 years' maturity on smaller houses. Another significant provision authorized an increase from 4 percent to 4½ percent in the interest rate on VA-guaranteed home mortgages if conditions in the mortgage market should require it. HHFA, Annual Report, 1948, pp. 74–76, 159–160.

credit terms still further on both FHA-insured and VA-guaranteed mortgages.[4] Legislation passed in 1948 and 1949 authorized the Federal National Mortgage Association (FNMA) to purchase VA-guaranteed mortgages and vastly expanded its authorization for the conduct of secondary market operations in both FHA-insured and VA-guaranteed mortgages.

TABLE 105.—*Characteristics of FHA-insured and VA-guaranteed mortgage loans on new houses, 1948–56*

Year	Average term (years)	Average loan/value ratio (percent)	Average payment/income ratio (percent)	Mortgagor's median effective income [1] (1954 dollars)	Percent of loans with no down payment	Percent of loans with 30-year term
1948	20.1	81.0	16.1	4,469	19.0	----------
1949	22.8	87.3	16.0	4,374	37.7	----------
1950	24.1	88.0	15.8	4,295	54.2	2.6
1951	23.4	86.5	15.1	4,401	22.2	12.2
1952	21.7	83.7	15.1	4,909	7.2	7.0
1953	22.2	86.5	15.2	4,929	10.7	5.1
1954	22.9	85.3	15.1	5,139	32.7	24.0
1955	25.6	88.5	16.3	5,462	48.2	43.7
1956	25.5	86.7	16.1	5,921	31.9	42.9
1957	[2]	[2]	[2]	[2]	8.4	43.6
1958 [3]	[2]	[2]	[2]	[2]	16.2	53.2

[1] Median effective income, as tabulated by FHA, deflated with the implicit-price deflator for personal consumption expenditures.
[2] Not available.
[3] First 9 months.

Sources: HHFA Annual Reports; Survey of Current Business; Veterans' Administration.

Some evidence of the effects of the liberalization of FHA credit terms is given in table 105 which presents some of the characteristics of FHA-insured and VA-guaranteed mortgages in the years 1948–58. The table indicates that the average term of FHA-insured mortgages increased by 4 years between 1948 and 1950, and at the same time the loan/value ratio increased from 81 to 88 percent. The percent of VA-guaranteed mortgages involving no downpayment increased from 19 in 1948 to 54 in 1950. These changes represent a substantial easing of mortgage credit terms as to both maturities and downpayments. Table 105 shows that there was a slight drop in the ratio of monthly payments to income for FHA mortgage borrowers. This occurred as a result of the extention of maturities which reduced the size of monthly payments. It is especially interesting that there was a drop of nearly $200 in the median real income (in 1954 dollars) of FHA-insured borrowers between 1948 and 1950. This occurred at the same time that average per capita real disposable income (also in 1954 dollars) increased by $90 as indicated in table 104. Thus, it appears that, as a result of the easing of credit terms, the demand for residential housing reached down into lower income brackets between the 2 years.

[4] The 1950 act raised the maximum loan guaranty under the VA program from $4,000 or 50 percent of the loan to $7,500 or 60 percent of the loan and raised the maximum maturity of VA-guaranteed mortgages from 25 to 30 years. HHFA, Annual Report, 1950, pp. 6–7, 138–140, 213–215.

TABLE 106.—*Privately owned permanent nonfarm dwelling units started, classified by type of financing, 1948–58*

Year	Number of starts (thousands)				Percentage distribution		
	Total	FHA insured	VA-guaranteed	Conventional	FHA insured	VA-guaranteed	Conventional
1948	914	294	(1)	[2] 620	32	(1)	[2] 68
1949	989	364	(1)	[2] 625	37	(1)	[2] 63
1950	1,352	487	(1)	[2] 865	36	(1)	[2] 64
1951	1,020	264	149	607	26	15	60
1952	1,068	280	141	647	26	13	61
1953	1,068	252	157	660	24	15	62
1954	1,202	276	307	619	23	26	51
1955	1,310	277	393	640	21	30	49
1956	1,094	189	271	634	17	25	58
1957	993	168	128	696	17	13	70
1958 [3]	994	237	59	697	24	6	70

[1] Not available.
[2] Includes VA-guaranteed.
[3] 1st 6 months seasonally adjusted at annual rate.

NOTE.—Details may not add to totals because of rounding.
Sources: HHFA, Annual Report, 1956; Housing Statistics; Federal Reserve Bulletin.

Table 106 shows privately owned nonfarm housing starts classified according to type of financing. FHA-insured starts increased by nearly 200,000 units or 66 percent between 1948 and 1950. Unfortunately, separate data are not available for VA-guaranteed and conventional mortgages covering these years, but the table shows that the 2 together increased more than 250,000 units or about 40 percent. Data on mortgage recordings, which cover borrowings to purchase both new and existing houses show increases of 13 percent for FHA-insured mortgages, 64 percent for VA-guaranteed mortgages, and 35 percent for conventional borrowing. Thus, VA financing apparently experienced a large increase. Actually VA loan applications declined steadily from late 1947 to mid-1949 and then expanded rapidly.[5] The main reason for this pickup was probably the large volume of secondary market support provided by the FNMA after that agency's operations were expanded, beginning in mid-1948. These operations picked up momentum in 1949 and 1950, as indicated in table 107, which summarizes FNMA operations for the period 1948–57. Net purchases of mortgages rose from virtually nothing in 1947 to $198 million in 1948, $652 million in 1949, and $575 million in 1950. It is apparent from the changes in the FNMA portfolio that purchases were heavily concentrated in VA-guaranteed mortgages.

Another factor which helped to account for the rapid expansion of mortgage credit in 1949 and 1950 was undoubtedly the change that occurred in credit conditions and interest rates generally. As shown in figure 24, the maximum interest rate on FHA-insured mortgages was 4½ percent during 1948 and 1949 and until April 1950, when it was lowered to 4¼ percent by the authority of the FHA. The maximum rate for VA-guaranteed mortgages remained at 4 percent throughout the 1948–50 period. With these rigid ceiling rates in effect, the supply of funds available for mortgages depended somewhat on the level of yields prevailing on competitive investments, such as corporate and Government securities. As figure 24 indicates, during 1948, the yield on high-grade corporate bonds remained in the neighborhood of 2.80 percent, being maintained there by the Federal

[5] See Annual Report of the Administrator of Veterans' Affairs, 1950, pp. 92–97.

Reserve's policy of supporting the market for long-term Treasury bonds. With the onset of recession in late 1948, a decline in the demand for funds combined with Federal Reserve measures to ease credit caused a gradual decline in yields which reached a level of about 2.60 percent in mid-1949 and remained there until mid-1950, then rose to around 2.65 percent later in that year. Thus, the differential between the interest rate on VA-insured mortgages and the yield on high-grade corporate bonds increased from about 1.20 percent in 1948 to about 1.40 percent in 1949–50. This improvement in the competitive position of VA-guaranted mortgages was undoubtedly a factor in producing the 1950 boom in residential construction, although the magnitude of the effect was probably not very great. In the case of FHA-insured mortgages, the rate was sufficiently high to attract an ample supply of funds to begin with, and the FHA felt justified in reducing it by one-quarter of 1 percent in April 1950, in order to stimulate the demand.

FIGURE 24

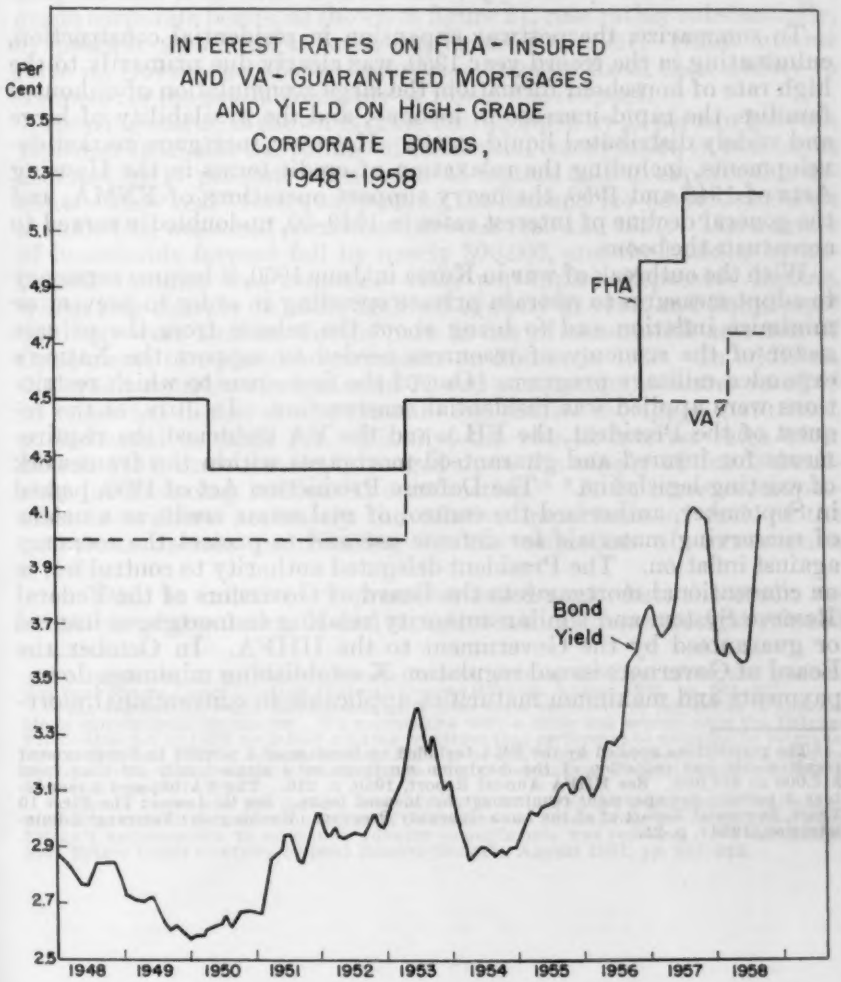

TABLE 107.—*Operations of Federal National Mortgage Association, 1948–57* [1]

[In millions of dollars]

Year	Purchases	Sales	Repayments and other credits	Portfolio (end of year)		Commitments undisbursed (end of year)
				FHA-insured	VA-guaranteed	
1948	198	----------	3	188	11	227
1949	672	20	23	403	425	824
1950	1,044	469	57	169	1,177	485
1951	677	111	63	204	1,646	239
1952	538	56	90	320	1,922	323
1953	543	221	101	621	1,841	469
1954	658	525	118	802	1,632	228
1955	411	62	170	901	1,714	75
1956	609	5	173	978	2,069	360
1957	1,119	2	190	1,237	2,737	764

[1] FNMA was rechartered as of Nov. 1, 1954, and since that date it has maintained a separate accounting for its 3 functions: (*a*) Secondary market operations; (*b*) Special assistance functions; and (*c*) Management and liquidating functions. This table is a consolidated statement which includes operations under all 3 headings.

Source: Federal National Mortgage Association.

To summarize, the postwar expansion in residential construction, culminating in the record year 1950, was clearly due primarily to the high rate of household formation, the large accumulation of unhoused families, the rapid increase in incomes, and the availability of large and widely distributed liquid assets. However, mortgage market developments, including the relaxation of credit terms in the Housing Acts of 1948 and 1950, the heavy support operations of FNMA, and the general decline of interest rates in 1949–50, undoubtedly served to accentuate the boom.

With the outbreak of war in Korea in June 1950, it became necessary to adopt measures to restrain private spending in order to prevent or minimize inflation and to bring about the release from the private sector of the economy of resources needed to support the Nation's expanded military program. One of the first areas to which restrictions were applied was residential construction. In July, at the request of the President, the FHA and the VA tightened the requirements for insured and guaranteed mortgages within the framework of existing legislation.[6] The Defense Production Act of 1950, passed in September, authorized the control of real estate credit as a means of conserving materials for defense use and to protect the economy against inflation. The President delegated authority to control terms on conventional mortgages to the Board of Governors of the Federal Reserve System and similar authority relating to mortgages insured or guaranteed by the Government to the HHFA. In October the Board of Governors issued regulation X establishing minimum downpayments and maximum maturities applicable to conventional mort-

[6] The restrictions applied by the FHA included an increase of 5 percent in downpayment requirements and reduction of the maximum mortgage on a single-family dwelling from $16,000 to $14,000. See HHFA Annual Report, 1950, p. 216. The VA imposed a mandatory 5 percent downpayment requirement for insured loans. See GI Loans: The First 10 Years, Decennial Report of of the Loan Guaranty Program (Washington: Veterans' Administration, 1954), p. 21.

gages,[7] and the HHFA put into effect similar controls applicable to FHA-insured and VA-guaranteed mortgages.[8]

The selective controls over mortgage credit, reflected in regulation X and the concomitant regulations of the FHA and the VA, were slow to exert their effects. One reason for this was that the regulations were anticipated and financing arrangements which were exempt from regulation were entered into prior to the application of the controls. Thus, there was a very large backlog of liberal financing arrangements to be worked through before the controls could exert their efforts.[9]

III. THE PERIOD OF REGULATION: 1951–52

In March 1951, the Treasury and the Federal Reserve negotiated their famous Accord, which relieved the Federal Reserve from its earlier obligation to support the market for Government securities and set it free for the first time since World War II to adopt a flexible monetary policy. A moderately restrictive monetary policy was adopted and long-term interest rates, typified by the yield on high-grade corporate bonds, as shown in figure 21, rose rather substantially, by postwar standards at least, during most of 1951. Since interest rates on Government-backed mortgages remain fixed, their ability to compete for the available supply of funds was reduced.

Housing starts, as shown in table 103, dropped by 25 percent between 1950 and 1951, and the volume of residential construction in real terms declined by 17 percent. A number of factors help to explain this decline. The "real" forces supporting the demand for houses, as shown in table 104, weakened somewhat between 1950 and 1951. The number of households formed fell by nearly 300,000, and the backlog of unhoused families was reduced. Real per capita disposable income, which rose sharply in 1950, declined slightly in 1951, and liquid asset holdings were smaller due in part to use of substantial amounts of these assets to make downpayments on houses in 1950. In addition, the credit controls of regulation X and companion measures resulted in somewhat higher downpayments and shorter mortgage maturities, as indicated in table 105. Finally, the rise in interest rates after March 1951, undoubtedly impinged upon the supply of funds available for financing residential construction.[10] It is, however, impossible to evaluate accurately the relative importance of each of the numerous factors contributing to the reduction of construction activity.

In 1952, as inflationary pressures eased somewhat, the credit restrictions of regulation X and companion measures were first relaxed

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[7] On regulation X, see Federal Reserve Bulletin, January 1951, pp. 22–33, and Residential Real Estate Under Controls, Federal Reserve Bulletin, August 1951, pp. 901–912.

[8] FHA regulations conformed substantially with those contained in regulation X applicable to conventional mortgages. VA restrictions were a little less severe, since the Defense Production Act of 1950 contained a clause requiring that preference be accorded to veterans.

[9] On this, see HHFA Annual Report, 1950, p. 9, and House Purchases in the 5 Months Following the Introduction of Real Estate Credit Regulation, Federal Reserve Bulletin, July 1951, pp. 777–796.

[10] Another factor was the decline, after March 1951, in FNMA's purchases of mortgages, reflecting cancellation or completion of commitments outstanding in early 1950 when FNMA's authorization to make new advance commitments was repealed. See Residential Real Estate Under Controls, Federal Reserve Bulletin, August 1951, pp. 901–912.

and later eliminated almost entirely.[11] As indicated in table 103, both housing starts and the volumes of residential construction remained at about the same level in 1952 as that attained in 1951. There was a sharp decline (340,000) in household formation, as shown in table 104, and credit terms tightened noticeably, as indicated in table 105, due to the increasing impact of credit restrictions prior to their relaxation in the latter part of the year. Figure 24 shows that bond yields remained relatively stable in 1952 but at a little higher level than prevailed in the 1948–50 period.

IV. FLEXIBLE MONETARY POLICY, 1953–58

By 1953, nearly all of the controls imposed by regulation X and companion measures had been removed. Since that time, we have relied in the main on monetary controls applied by the Federal Reserve System to regulate credit in general, including the use of credit to finance residential construction. As we shall see, however, general credit controls have been supplemented to a limited extent by selective adjustments in credit terms by the FHA and the VA; and, of course, changes in housing legislation have also had important effects at times. But major reliance has been placed on general credit controls, and their influence has been important.

In the first half of 1953 inflationary pressures appeared and monetary policy was quite restrictive, causing interest rates to rise sharply, as shown in Figure 24. This rise weakened the competitive position of FHA and VA mortgages, and there was some decline in Government-backed financing, particularly the VA-guaranteed variety which carried an interest rate ceiling of 4 percent. In April, however, the ability of insured and guaranteed mortgages to compete for funds was considerably strengthened when the FHA raised the interest rate for insured mortgages from 4¼ to 4½ percent and the VA raised the rate for guaranteed mortgags from 4 to 4½ percent. Around midyear, congestion developed in the capital market and, amid indications of a decline in business activity, the Federal Reserve reversed its restrictive credit policy. Interest rates fell sharply from mid-1953 to early 1954, as shown in Figure 24.

As can be seen from table 103, the number of housing starts in 1953 was about the same as in 1952, although the volume of residential construction was about 6 percent higher. Real factors affecting demand apparently did not change very much from 1952, although there was some increase in real per capita disposable income and apparently some increase in household liquidity. The mortgage market tightened in the first half of the year and eased in the latter half, as monetary policy shifted first toward restriction, then back toward ease.

Residential construction experienced a substantial expansion in 1954 and 1955, as shown in table 103. Housing starts in 1955 were nearly as high as in the peak year of 1950, and the volume of construction was 17 percent higher. Financial factors seem to have had a great

[11] Regulation X was amended to permit more liberal credit terms in June 1952. The Defense Production Amendments of 1952 contained a provision that credit restrictions be suspended when housing starts, seasonally adjusted, fell below an annual rate of 1.2 million for 3 consecutive months. This occurred in June, July, and August, 1952, and consequently virtually all restrictions were removed in September except those relating to maturities and a 5 percent downpayment on Government-supported mortgages. These remaining restrictions were removed in April 1953. See HHFA Annual Report, 1952, pp. 2 and 155.

deal of influence in producing the 1954–55 boom in residential construction. The real forces supporting housing demand were very much weaker in 1954–55 than at the time of the earlier boom in 1950. Household formation was actually lower than in 1952 and 1953 and in 1955 was 750,000 below the 1950 level. The backlog of unhoused families was about 700,000 lower in 1955 than in 1950, and the liquidity position of households was much less favorable. (See table 104.) The only favorable factor was real per capita disposable income which was about 8 percent higher than in 1950.

The Housing Act of 1954, passed in August, contributed to the boom by lowering downpayment requirements for FHA-insured mortgages, raising permissible maturities to 30 years and increasing the maximum size of the loan from $16,000 to $20,000. The effects of these changes show up in table 105, which indicates a significant increase in maturities and reduction of downpayments between 1953 and 1955—in fact, FHA credit terms in 1955 were the easiest on record. However, table 106 makes it clear that FHA-mortgage credit did not make much of a contribution to the boom. FHA-financed starts increased only very moderately between 1953 and 1955. And it should be noted that conventional starts actually declined slightly in the same period.

Very nearly the entire increase in housing starts between 1953 and 1955 is accounted for by VA-financed units. VA starts increased by about 240,000 between 1953 and 1955 and were nearly 2½ times as great in 1955 as in 1953. (See table 106.) Two factors were primarily responsible for this rapid expansion in VA-insured lending. The first was the final removal in April 1953 of the restrictions on downpayments and maturities on FHA and VA mortgages which had been in effect since October 1950. With the removal of these restrictions, no-downpayment 30-year mortgages became permissible under the general VA-mortgage-insurance program. As shown in table 105, no-downpayment loans grew from 11 percent of the total in 1953 to 33 percent in 1954 and 48 percent in 1955, and 30-year loans expanded from 5 percent of the total in 1953 to 24 percent in 1954 and 44 percent in 1955.

The second cause of the large and rapid growth of VA-insured lending was the change that occurred in the available supply of funds. This was partly due to the rise in the VA interest rate from 4 percent to 4½ percent which became effective in April 1953. In addition, the declining general demand for credit associated with the recession of 1953–54, together with a rather aggressive easy-money policy on the part of the Federal Reserve, produced a sharp decline in interest rates generally. As a result of these two developments, the differential between the interest rate on VA-insured mortgages and the yield on high-grade corporate bonds increased from less than 0.8 percent in April 1955 to more than 1.6 percent—the largest differential on record—in April 1954. Although the differential was reduced as monetary policy tightened in 1955, it remained at 1.4 percent or higher most of the time until the spring of 1956. This can be seen from the lower panel of figure 25, which shows the movements of the differential during the period 1953–58. This large interest-rate differential made VA mortgages attractive to investors and insured an ample supply of funds to finance the large expansion.

In 1955 the housing boom reached massive proportions, and it was accompanied by very high levels of business and public construction. As a result, construction costs began to rise sharply, and in the context of the general inflation that prevailed, measures were put into effect to restrain the housing boom.[12] In addition to these selective restrictions, the generally tight monetary policy of the Federal Reserve began to have some effect, with the result that housing starts began to decline and by the end of 1955 had reached a seasonally adjusted annual rate of less than 1.2 million. Due to the decline in housing starts, the selective restrictions were short lived and were superseded before the end of 1955 by measures designed to stimulate housing construction.[13]

Residential construction continued to decline in 1956 and 1957. Housing starts fell quite steadily from a seasonally adjusted annual rate of 1.41 million in January 1955 to a rate of 0.933 million in March 1957, a decline of 34 percent. Starts financed by VA-guaranteed mortgages, which, as we have seen, had been the major factor in the expansion from 1953 to 1955, now accounted for a major portion of the decline. VA starts fell from 393,000 in 1955 to 271,000 in 1956 and to 128,000 in 1957. This decline continued in 1958 when VA starts dwindled to a seasonally adjusted annual rate of 59,000 in the first half of the year. (See table 106.) FHA-insured starts also declined substantially from 277,000 in 1955 to 189,000 in 1956, and 168,000 in 1957.

Housing legislation passed in 1957 and 1958 was designed to spur residential construction. The Housing Act of 1957, passed in July, reduced downpayment requirements for FHA-insured mortgages, and the Emergency Housing Act of 1958, enacted in April, reduced the requirements still further.[14] Each of these acts also made provisions for more liberal support of the mortgage market by the FNMA under its regular secondary market operations and its special assistance functions. As indicated in table 107, FNMA support operations increased in magnitude in 1956 and 1957. Net purchases of mortgages increased from $349 million in 1955 to $604 million in 1956 and $1,117 million in 1957, and commitments outstanding increased by nearly $700 million between the end of 1955 and the end of 1957.

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[12] These restrictive measures included (*a*) imposition by FHA and VA of a requirement that closing costs be paid in cash; (*b*) reduction of maximum maturity of FHA-insured and VA-guaranteed mortgages to 25 years and increase of 2 percent in minimum downpayments; and (*c*) limitations on borrowing by member savings and loan associations from Federal home-loan banks for purpose of making new mortgage commitments. See HHFA Annual Report, 1955.

[13] Actions taken in 1955 included (*a*) suspension of sales by FNMA from its management and liquidation portfolio and increase in purchases of mortgages under secondary market operations, and (*b*) relaxation of restrictions on borrowing by savings and loan associations from Federal home-loan banks. Further easing measures adopted in 1956 included (*a*) restoration of maximum maturity for FHA and VA mortgages to the statutory limit of 30 years; (*b*) reduction of FNMA common stock subscription requirement from 3 percent to 2 percent and later to 1 percent; (*c*) inauguration by the FNMA of a standby commitment procedure for the purchase of FHA and VA mortgages and later an increase in the purchase price under this procedure; (*d*) an increase in the limit on borrowing by savings and loan associations from Federal home-loan banks; and (*e*) reduction of minimum downpayment requirements for FHA-insured mortgages from 7 percent to 5 percent for homes valued at $9,000 or less. See HHFA, Annual Report, 1956.

[14] The Housing Act of 1957 lowered downpayments on FHA-insured mortgages from 5 percent of the first $9,000 of appraised value and 25 percent of the excess over $9,000 to 3 percent of the first $10,000, 15 percent of the next $6,000, and 30 percent of the excess over $16,000. It required the FHA Commissioner to determine that the lower downpayments would be in the public interest before putting them into effect. The reductions were made effective by the FHA in August 1957. The 1958 act reduced downpayments still further to 3 percent of the first $13,500, 15 percent of the next $2,500, and 30 percent of the excess over $16,000.

Housing starts financed by FHA-insured mortgages, on a seasonally adjusted basis, began to pick up early in 1957 and have continued to rise, no doubt due in part to the stimulus of the more liberal terms, until in mid-1958 they were back at a level corresponding roughly to mid-1955.[15] However, the VA program, which had played a much greater role in the expansion of 1953–55, continued to decline through 1957 and showed no sign of a pickup until early in 1958.

It seems quite clear that the major cause of the decline in residential construction which began late in 1955 was the restrictive monetary policy of the Federal Reserve and that the effects of this restrictive policy were concentrated mainly on the important VA program. Figure 25, covering the period 1953–58, shows that the differential between the interest rate on VA-guaranteed mortgages and the yield on high-grade coporate bonds (shown in the lower panel of the chart) bears a close relationship to the proportion of housing starts financed under the VA program (upper panel of chart). When the differential widened between 1953 and 1955, the VA program expanded greatly, and as the differential declined to unprecedentedly low levels in 1956 and 1957, the program dwindled in importance.

[15] See chart on p. 8, of Housing Statistics for August 1958.

FIGURE 25

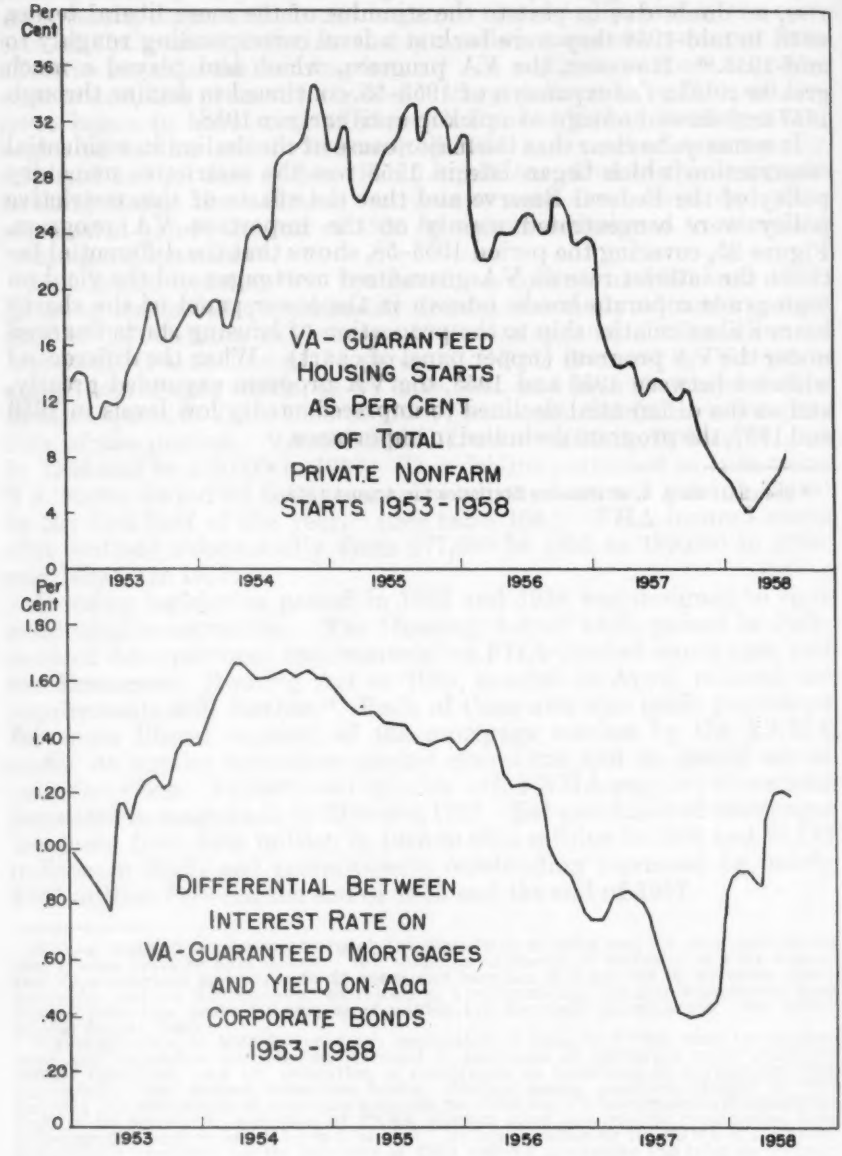
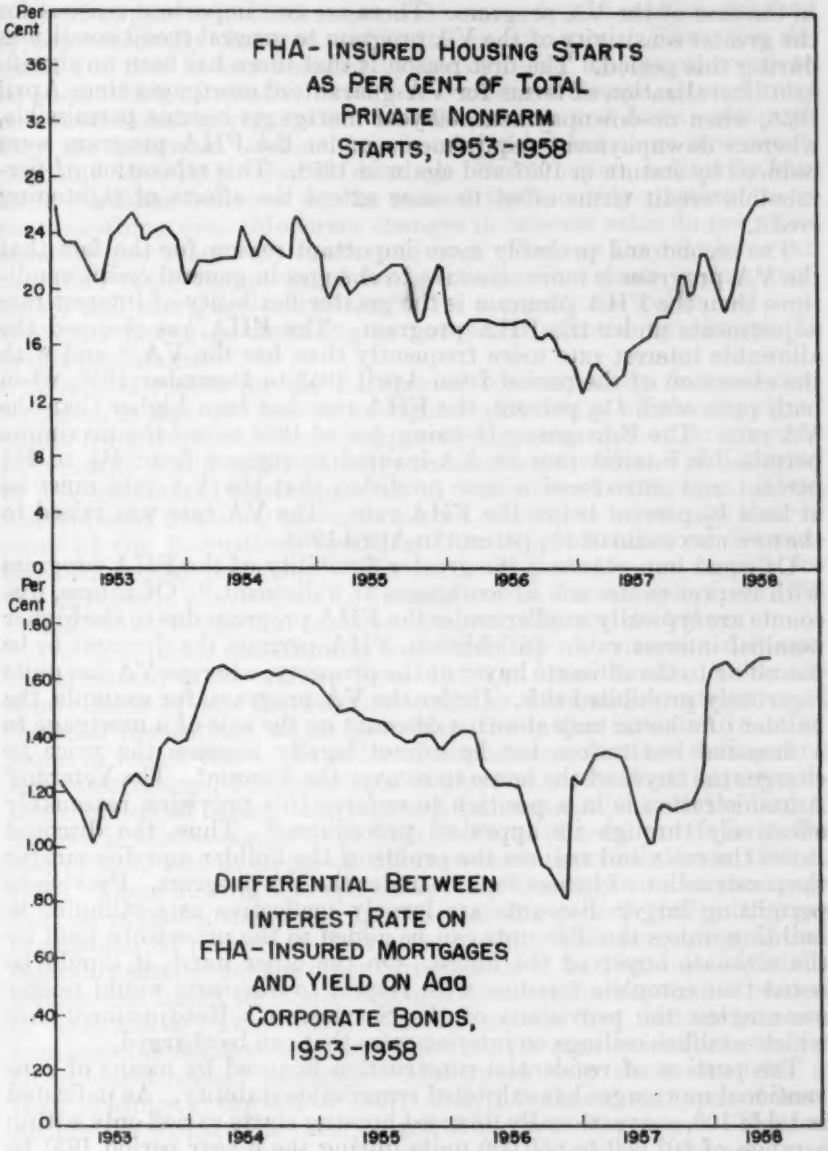

Per Cent
36
32
28
24
20
16
12
8
4
0
VA-GUARANTEED HOUSING STARTS AS PER CENT OF TOTAL PRIVATE NONFARM STARTS 1953-1958
1953
1954
1955
1956
1957
1958
Per Cent
1.80
1.60
1.40
1.20
1.00
.80
.60
.40
.20
0
DIFFERENTIAL BETWEEN INTEREST RATE ON VA-GUARANTEED MORTGAGES AND YIELD ON Aaa CORPORATE BONDS 1953-1958
1953
1954
1955
1956
1957
1958

FIGURE 26



33034—58——18

A similar comparison for the FHA program, presented in figure 26, shows traces of the same relationship, but it is much less clear-cut than in the case of the VA program. There are two important reasons for the greater sensitivity of the VA program to general credit conditions during this period. The first reason is that there has been no significant liberalization of terms for VA-guaranteed mortgages since April 1953, when no-downpayment, 30-year mortgages became permissible, whereas downpayment requirements under the FHA program were reduced by statute in 1957 and again in 1958. This relaxation of permissible credit terms offset to some extent the effects of tightening credit.

The second and probably more important reason for the fact that the VA program is more sensitive to changes in general credit conditions than the FHA program is the greater flexibility of interest rate adjustments under the FHA program. The FHA has changed the allowable interest rate more frequently than has the VA,[16] and with the exception of the period from April 1953 to December 1956, when both rates were 4½ percent, the FHA rate has been higher than the VA rate. The Emergency Housing Act of 1958 raised the maximum permissible interest rate on VA-insured mortgages from 4½ to 4¾ percent and introduced a new provision that the VA rate must be at least ½ percent below the FHA rate. The VA rate was raised to the new maximum of 4¾ percent in April 1958.

Of equal importance is the greater flexibility of the FHA program with respect to the sale of mortgages at a discount.[17] Of course, discounts are typically smaller under the FHA program due to the higher nominal interest rate. In addition, FHA permits the discount to be passed on to the ultimate buyer of the property, whereas VA has quite rigorously prohibited this. Under the VA program, for example, the builder of a house may absorb a discount on the sale of a mortgage to a financial institution, but he cannot legally increase the price he charges the buyer of the house to recover the discount. The Veterans' Administration is in a position to enforce this provision reasonably effectively through its appraisal procedures.[18] Thus, the discount raises the costs and reduces the profits of the builder and discourages the construction of houses for sale under the VA program. Provisions permitting larger discounts are largely ineffective as a stimulus to building unless the discounts can be added to the price to be paid by the ultimate buyer of the house. On the other hand, it should be noted that complete freedom with respect to discounts would render meaningless the provisions of the Servicemen's Readjustment Act which establish ceilings on interest rates that can be charged.

The portion of residential construction financed by means of conventional mortgages has exhibited remarkable stability. As indicated in table 106, conventionally financed housing starts varied only within a range of 607,000 to 660,000 units during the 6-year period 1951 to 1956. In 1957 and early 1958 when residential construction fell, con-

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[16] During the 1956–57 period of tight credit, the FHA interest rate was raised twice: from 4½ to 5 percent in December 1956, and from 5 to 5¼ percent in August 1957.

[17] The Housing Act of 1957 directed the FHA and the VA to regulate the portion of the discount on mortgages that builders and sellers might absorb. The limits were set at 1 to 2½ percent on FHA mortgages and 2½ to 5½ percent on VA mortgages. The Emergency Housing Act of 1958 removed these discount control requirements.

[18] Various extralegal arrangements have been used at times to shift the discount to the buyer.

ventionally financed starts actually increased to a rate of around 700,000 per year.

There appear to be three important reasons for the relative stability of conventionally financed residential construction. First, the demand for new houses financed by conventional mortgages seems to be quite interest inelastic. As credit conditions change, interest rates on conventional mortgages are free to move up and down—although they are somewhat stickier than bond yields—but these movements probably have little effect on demand. Home buyers ordinarily base their purchase decisions on the size of the monthly payment more than anything else. Moderate changes in interest rates do not affect monthly payments very much, and such effects as they do have can be rather easily compensated for by small adjustments in downpayments and mortgage maturities.[19] As a result, the volume of conventional mortgage financing is not much affected by changes in credit conditions.

A second reason for the stability of conventionally financed construction is that at times when tight credit drains off the supply of funds from the Government-supported segments of the market, some buyers who would under ordinary circumstances utilize FHA-insured or VA-guaranteed financing, shift to conventional mortgages. Thus, conventional financing serves as a kind of balance wheel and absorbs some of the fluctuations resulting from the instability of Government-supported financing. This factor is probably responsible for the increase in conventionally financed starts, for example, from 1956 to 1957 when residential construction generally was declining.

The final factor contributing to the stability of conventional financing is related to the sources from which it draws funds. Table 108 shows some of the characteristics of the four major categories of financial institutions which have been the major investors in mortgages in recent years. In order of importance, they are savings and loan associations, life insurance companies, mutual savings banks, and commercial banks. Savings and loan associations are the largest lenders in the mortgage field, both in terms of total portfolio at the end of 1957 and in terms of the increase in portfolio from 1950 to 1957. These institutions specialize very strongly in the mortgage field as is indicated by the fact that at the end of 1957 mortgages constituted 83 percent of their total assets. This percentage is considerably smaller for the other three classes of institutions—especially commercial banks for which mortgages constitute less than 8 percent of total assets. Table 108 also brings out the fact that savings and loan associations have a strong preference for conventional mortgages. Government-backed mortgages constituted only about one-fifth of their holdings at the end of 1957. For the other three types of institutions the comparable ratio ranged from 45 to 65 percent. The fact that the most important group of mortgage lenders puts nearly all its funds into conventional mortgages and rarely invests much in assets other than mortgages means that the conventional mortgage market experiences a large and dependable flow of funds from this source, which adds greatly to its stability. At the same time, it means that

[19] For a discussion of the effects of changes in downpayment, term of mortgage, and interest rate on the size of the monthly payment, see E. M. Fisher, Urban Real Estate Markets: Characteristics and Financing (National Bureau of Economic Research, 1951), ch. 4.

the funds going into Government-backed mortgages come to a greater extent from the other three classes of institutions which have more diversified portfolios and are more inclined to shift their flows of funds between mortgages and other assets in response to changes in yield relationships.

TABLE 108.—*Characteristics of major institutional mortgage lenders*

Type of institution	Residential mortgage portfolio, Dec. 31, 1957 (billions)	Increase in mortgage portfolio, 1950–57 (billions)	FHA and VA mortgages as a percent of total mortgages, Dec. 31, 1957	Mortgages as a percent of total assets, Dec. 31, 1957
Savings and loan associations	[1] $40.1	[1] $26.5	21.6	83.1
Life insurance companies	[1] 32.6	[1] 17.9	44.5	32.3
Mutual savings banks	19.0	12.0	65.5	54.1
Commercial banks	17.1	6.7	49.1	7.7

[1] Involves mortgages on business property.

Source: Federal Reserve Bulletin, August 1958.

We may conclude that during the period since 1953, general credit controls have had a strong impact on residential construction through their ability to influence the supply of funds available for Government-supported mortgages, particularly those guaranteed by the VA. Presumably this will continue to be the case as long as the essential features of our present institutional structure and monetary controls are retained. In the final section of this paper, we shall attempt an evaluation of present arrangements in comparison with alternatives that might be adopted.

V. AN EVALUATION OF THE EFFECTS OF MONETARY POLICY ON RESIDENTIAL CONSTRUCTION

There can be little doubt that, under present institutional arrangements, residential construction is quite sensitive to changes in credit conditions and monetary policy and that this sensitivity is mainly due to the existence of interest rate ceilings on Government-supported mortgages.[20] Concerning the desirability of this sensitivity and of the arrangements responsible for it, there is considerable room for legitimate difference of opinion.

One viewpoint which has numerous adherents is that the present high degree of sensitivity of residential construction to general credit controls is undesirable and that steps should be taken to reduce or eliminate it. This position has received the support of Chairman Martin of the Board of Governors of the Federal Reserve System. The present administration has also supported it and has recommended on several occasions that the Congress act to eliminate or reduce substantially the sensitivity by removing or greatly relaxing the limits it has placed on interest rates that may be charged under the FHA and VA programs.[21]

[20] Arguments to this effect, similar to those presented above, are to be found in J. J. O'Leary, Postwar Trends in Sources and Uses of Capital Funds, and R. I. Robinson, The Impact of Monetary Policy on Residential Financing, both in Conference on Savings and Residential Financing, 1958 proceedings, United States Savings & Loan League, 1958, pp. 11–39 and 125–144, respectively.

[21] This position is taken in O'Leary, op. cit., esp. pp. 37–38.

Two arguments are advanced in favor of reducing the sensitivity of residential construction to monetary policy by permitting interest rates on Government-supported mortgages to fluctuate more freely. The first is that the present arrangements discriminate against residential construction at times when a restrictive monetary policy is applied and, by producing alternative periods of feast and famine in the supply of mortgage money, accentuate fluctuations in residential construction. The second argument, which, in a sense, complements the first, is that when credit conditions tighten and increases in interest rates on other kinds of loans and securities drain off a portion of the supply of funds available for FHA and VA mortgages, these funds are merely diverted to other uses which are free to compete effectively for them. As a result, the reduction in expenditures on residential construction is compensated for, in large part at least, by an increase in other forms of income-generating expenditures. Thus, the arrangements which are responsible for the sensitivity of residential construction contribute little to general economic stability, their main effect being to produce rather arbitrary shifts in the allocation of resources.

This is certainly a plausible line of argument, but I believe its foundations are open to serious question. Consider first the question of discrimination. The FHA and VA programs are governmental programs which were adopted to encourage housebuilding and homeownership, especially on the part of families of moderate income. It seems to me that it is perfectly legitimate for the Government to manage such a program so as to contribute to economic stability by encouraging it to expand in recession periods and contract in times of inflation.

The mortgage insurance and guaranty programs are deliberately and obviously designed to discriminate in favor of moderate-income families who would not be able to meet the downpayment and other requirements to obtain conventional mortgages. Most Americans, including, I am sure, the majority of those favoring flexible interest rates, would agree that this discrimination has been generally, in the public interest. It is inconsistent to hold that it is all right for the Government to discriminate in this field and at the same time to contend that it is improper to design the program in such a way as to vary the extent of the discrimination in the interest of economic stability.

The present arrangements may at times have advantages even for the beneficiaries of the insurance and guaranty programs. In 1955–57, residential construction declined from a seasonally adjusted annual rate of about 1.4 million units started at the beginning of 1955 to a rate slightly over 1 million units in the third quarter of 1957 when gross national product reached its peak level. Thus, housing starts declined by approximately 27 percent during this period. In spite of this decline, a substantial portion of which was probably caused by tight credit, residential construction costs increased by more than 9 percent. The main reason for this rise in costs at a time when the volume of residential construction was declining was that total construction expenditures were increasing at a rather rapid pace—from a seasonally adjusted annual rate of about $41 billion at the beginning of 1955 to a rate of around $48 billion in the third quarter of 1957,

a rise of 17 percent. Thus, private nonresidential and public construction increased by more than residential construction declined, and prices of materials and labor were driven up.

If interest rates on Government-supported mortgages had been flexible, it seems certain that total construction expenditures would have been larger. Since productive capacity in the building materials industries and the supply of skilled labor were substantially fully utilized, the main impact of increased spending would probably have been on prices. If interest rates had been flexible, there might have been a somewhat larger volume of residential construction, achieved mainly at the expense of a reduction in nonresidential construction and a further rise in prices. Thus, the existence of interest rate ceilings probably resulted in (*a*) a slightly smaller volume of total construction; (*b*) a somewhat smaller volume of housebuilding; (*c*) a somewhat larger volume of nonresidential construction; and (*d*) a lower level of construction costs and prices, than would have prevailed in their absence. As compared with what would probably have happened if interest rates had been flexible, home-buyers lost out in the sense that they get fewer houses but gained to the extent that the houses they did get cost them less.[22] Business firms and governmental units gained because they obtained a larger physical volume of construction—more plants, stores, schools, public buildings—and also obtained them at lower prices. It is thus not even clear that home-buyers as a class would have been better off with flexible interest rates, and it is even less clear that the public interest in general would have been better served.

In addition to their effects on the allocation of resources and on construction costs and prices, just discussed, I believe the existence of the interest rate ceilings also helped to slow down the general rise in prices in 1955–57. This brings us to the second argument that is sometimes advanced by proponents of flexible interest rates—the argument that the rate ceilings serve mainly to rechannel spending without having much effect on the total. According to this view, if FHA and VA interest rates had been flexible in 1955–57, the increased competition for funds would have raised interest rates generally and this rise would have damped down other forms of spending by approximately as much as residential construction expenditures would have increased.[23]

This argument rests fundamentally upon the quantity theory of money. It assumes that there is a rather rigid relation between the supply of money and the level of income-generating expenditures. If controls—in the present instance interest-rate ceilings—prevent the money from being spent on one thing, most of it will necessarily be spent on something else. The only way to control total spending is to control the money supply.

I believe that recent experience indicates that this line of reasoning is completely unrealistic as applied to the American economy today. Between the first quarter of 1955 and the third quarter of

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[22] The lower costs to home buyers were due partly to lower prices of houses and partly to lower interest rates.

[23] The preceding argument about allocation would be little affected if this view were correct, since there would probably still be a net increase in total construction expenditures, with some of the damping effects falling on other credit financed forms of spending such as business expenditures on machinery and equipment and consumer spending on durable goods financed by installment credit.

1957, total income-generating expenditures—the GNP—increased by 16 percent while the money supply increased by only 3 percent. Interest rates rose as the demand for funds increased while the Federal Reserve by the use of its general credit control weapons kept a rather strict rein on the total supply of funds. It is difficult to find evidence that the rise in interest rates caused much of a reduction in expenditures. The higher rates did, however, intensify efforts to economize on cash balances with the result that many dollars formerly being held idle were now spent, thus helping to drive up prices.[24] Under these conditions, if FHA and VA interest rates had been flexible, the additional competition for funds would doubtless have caused interest rates to rise somewhat more than they did. However, the higher rates would probably have served to activate additional idle cash balances without having much effect on income-generating expenditures, and the net result would have been more price inflation.

The fact is that monetary policy appears to have had more effect on residential construction than on anything else in the last few years. There may also have been significant effects on capital expenditures by smaller business concerns and on debt-financed expenditures by State and local governments, but even here the evidence is not entirely clear or convincing.[25] If interest rates on Government-supported mortgages were made flexible, I believe one of the major mechanisms by which monetary policy exerts its effects on the economy would be eliminated and the effectiveness of monetary policy as a means of promoting economic stability would be significantly reduced.

I would therefore favor retention of the interest rate ceilings. However, provision must be made for adjusting these ceilings as underlying conditions change. For example, it is possible to imagine circumstances in which general inflationary pressures are present which call for a generally restrictive monetary policy while at the same time the construction sector of the economy is operating below its capacity. In this situation, the existence of fixed ceilings on FHA and VA interest rates would result in undue restriction in the construction field. Under such conditions, the rate ceilings should be raised. Similarly, there might be circumstances in which a lowering of the ceilings would be desirable.

In the last few years, adjustments have been made in the interest rate ceilings, partly through administrative rulings of the FHA and the VA within the limits of the authority delegated to these agencies by the Congress and partly through statutory changes made by the Congress itself. I believe the results achieved under these arrangements have been reasonably satisfactory. However, I think the possibility of delegating authority to adjust the interest rate ceilings to the Board of Governors of the Federal Reserve System is worthy of consideration. This would involve deliberate recognition of the rate ceilings as a device for controlling the supply of credit for residential construction, and I believe the use of this control would be more satis-

[24] For a further development of this argument see W. L. Smith, On the Effectiveness of Monetary Policy, American Economic Review, XLVI, September 1956, pp. 588–606, and Monetary Policy and the Structure of Markets, in The Relationship of Prices to Economic Stability and Growth, compendium of papers submitted by panelists appearing before the Joint Economic Committee (Government Printing Office 1958), pp. 493–511.

[25] On this, see Smith, Monetary Policy and the Structure of Markets, op. cit.

factorily integrated with our other weapons of economic stabilization if the administration of it were turned over to the Federal Reserve.

Our experience with restrictive monetary policy during 1955–57 suggests that our present monetary controls impinge with special force on a few sectors of the economy. Residential construction seems to be affected more than any other sector, for reasons outlined in this paper. Expenditures by State and local governments on schools, highways, and other public works also seem to be fairly sensitive to credit conditions, and, under some circumstances, capital expenditures by smaller business concerns may be disproportionately affected. On the other hand, capital outlays of larger businesses and consumer expenditures on durable goods financed by means of installment credit appear to be quite insensitive to monetary policy.

While more intensive study of the effects of monetary policy is needed in order to arrive at a satisfactory evaluation, I believe our recent experience suggests that the general credit-control weapons now employed by the Federal Reserve need to be supplemented by selective controls in areas where such controls are feasible. I would suggest the establishment of selective controls over consumer installment credit and the imposition on commercial banks of variable secondary-reserve requirements in the form of Government securities. The latter proposal would give the monetary authorities some power to control the composition of bank portfolios. Shifts of bank assets from Government securities to loans, which the Federal Reserve was unable to prevent with its present weapons, contributed significantly to inflation in 1955–57, I believe.

The adoption of selective credit controls such as these, together with the retention of adjustable-ceiling interest rates on Government-supported mortgages, should serve to broaden the impact of monetary policy and make it a more flexible and effective means of promoting economic stability. It would also mean that, when monetary restriction is necessary in times of inflationary pressure, its effects would not be so excessively concentrated on residential construction as has been the case in the last few years.

IMPROVEMENT OF FEDERAL HOME LOAN BANK PROGRAMS

EDWARD E. EDWARDS, Professor of Finance, School of Business, Indiana University, Bloomington, Ind.

The following question is discussed in this paper:

> In what ways could the programs administered by the Federal Home Loan Bank Board be supplemented or modified to increase and to improve the distribution of the pool of credit available for new residential construction?

Before exploring the ways to do so, however, it might be worth while to consider how much increase or what improvement is needed. If agreement could be reached as to the proper objectives for these programs, the necessary means for accomplishing the desired ends would be more readily apparent.

The programs administered by the Board include, among others, the promotion of a system of home financing institutions, and the supervision of the Federal home loan banks. Both of these programs appear to be based on the assumption that home financing needs should be met by private rather than public means, with the function of government being to provide an appropriate environment for savings to flow into home financing.

A most important and distinctive feature of these programs is that lending decisions are made at the local level by the institutions which assume the risk, with a minimum of interference either by government or a remote home office. This, it seems to me, is the American way, and the best way for financial resources to be allocated. Thus I would hope and certainly recommend that as much as possible of our home financing be done through the programs administered by the Federal Home Loan Bank Board. The corollary of this, of course, is that we make as little use as necessary of Government insurance and guaranty programs, direct lending by Government agencies and related programs that put or tend to put the Federal Government into the home financing business.

But if we are to increase the importance of the programs administered by the Federal Home Loan Bank Board (which probably means that we must increase the lending volume of savings and loan associations, since neither life insurance companies nor mutual savings banks seem likely to join the bank system in any large numbers), then we must make certain that lending services are improved. Right now the more typical loans made by savings and loan associations are too small a percentage of the cost of the houses, and have too high a rate of interest and too short a term as compared with Government insured or guaranteed loans.

Thus I conclude that the proper objective for the Federal Home Loan Bank Board would be to expand the scope and to improve the

terms of the lending programs under its jurisdiction. Expansion should be sufficient for home builders and home buyers to meet an increasing portion of their home financing needs through these programs, thus lessening the need for further Government programs. Improvement in lending terms should be sufficient to enable borrowers to obtain substantially the same terms as under insured or guaranteed loan programs. These objectives can, in my opinion, be achieved.

What needs to be done to bring about these results? First of all, Congress needs to define the responsibilities of the Board in such a way as to assure a more positive and constructive attitude on the part of the Board and its administered agencies in meeting home financing needs. The record [1] of now over a quarter of a century shows quite clearly that the Board and its administered agencies have been more concerned with preventing the failure of any savings and loan association than with the raising of necessary funds to meet home financing needs. As a result, savings and loan associations do no more, proportionately, of the home financing business than they did in the decade of the twenties before the bank system was organized.

Responsibility for this performance rests only partially with the Board. Congress, in recent years, has not asked it to do more; neither have the member associations nor the public. Builders and home buyers, who might otherwise have raised objection to the Board's programs and policies, obtained their goals through expansion of Government insured or guaranteed loan programs, and Government-financed secondary mortgage markets. While further expansion of these Government programs presumably might continue throughout the decade of the sixties, that would, in my opinion, take the Federal Government much further into the house building and home financing business than either necessary or desirable.

Second, the Board should be more mindful of home financing needs and less of savings and loan operations, which probably means that the Board should be enlarged, appointments made less political, emoluments of office substantially increased, and authority enhanced. While the Board may never be considered as having comparable responsibility to the Board of Governors of the Federal Reserve System, the importance and prestige of the two boards should be much more nearly equal than at present. Certainly the Board should be as independent of the Bureau of the Budget, the Civil Service Commission, the General Accounting Office, and other similar agencies as is the Board of Governors.

Perhaps one reason why the Board does not have either the necessary authority or prestige is the fact that it is overly concerned with savings and loan operations. If so, the examining, supervising, and insuring of savings and loan associations should be subordinated to the more important function of providing an adequate supply of home financing credit. Certainly some thorough study should be made of the possibility of having these routine functions delegated by the Board to one or more administrative agencies rather than leaving them combined with the more imaginative function of providing adequate home financing.

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[1] For the factual record, as well as for carefully considered recommendations, the author suggests reference to either or both of two studies, as follows: Report of the Special Committee To Study the Federal Home Loan Bank System, U. S. Savings and Loan League, September 1956, and A Program To Revitalize the Federal Home Loan Bank System, Savings Association League of New York State, May 1958.

Third, the Board should assume responsibility for becoming the major source of information on home mortgage credit, and the agency to which Congress should turn for such information. The Chairman of the Board should be able to speak with the same authority on home financing needs as does the Chairman of the Board of Governors on credit for business. This suggests the development of a highly intelligent, well-trained research staff, and wide dissemination of the facts about home financing.

Since home financing (and the real estate business generally) is so local in character, being well informed about the subject on a national basis requires competent observers at the local level and effective communication upward. The Federal home loan banks, if adequately staffed (and perhaps if relieved of supervisory functions), could meet this need.

If the Board and the regional banks are to become the best-informed agencies on home-financing needs, considerable increase must be expected in their staffs and their operating budgets. To pay for this increase, a different arrangement for assessing costs to member associations may be needed. One possibility would be to require member associations to carry at their regional banks some minimum deposit or reserve balances, without interest, not unlike the present reserve requirements of member banks in the Federal Reserve System. This is not recommended, however, since the principal effect of such a requirement would be to tie up funds that might better be invested in home mortgages.

(While a good case can be made for subjecting associations to the same reserve requirements met by commercial banks, the best way to work toward equality would be to reduce the reserve requirements of member banks. Present requirements, which are more the result of historical accident than of reason or necessity, are far too high.)

Another possibility for giving the Board adequate operating funds would be to permit the Federal home loan banks to issue demand notes in the form of currency. This is not recommended either, for obvious reasons, but is suggested to illustrate the great advantage which the Federal Reserve System has in obtaining its funds without interest cost. The Federal Home Loan Bank Board has no "subsidy" of this kind, and probably does not need one, but it does need additional income if it is to reach maximum effectiveness.

Fourth, the Board should make increasing use of the tremendous borrowing power of the Federal home loan banks, and should seek the most appropriate means for putting these funds to use in those home mortgage markets most in need of additional funds. Here is a sleeping giant that could pick up and carry much of the home-financing burden of the next decade. No one really knows how much could be borrowed, but the amount certainly is many, many times the maximum yet reached.

At the close of business in 1957, the total obligations outstanding amounted to only $826 million, or considerably less than 1 percent of the total home mortgage debt. But that is only half the story. On that same date, the banks held in excess of $900 million in United States Government obligations, which in effect meant that the bank system, on a net basis, was contributing no funds whatever to the home mortgage market.

Failure of the Federal Home Loan Bank System to issue its own long-term obligations in the capital markets undoubtedly has stimulated the demand for Government insured or guaranteed loans by large investors who otherwise might have bought bank obligations. Thus the Board has weakened its own programs in two ways at the same time, first by denying its members access to long-term borrowed funds and second by encouraging potential buyers of its obligations to acquire home mortgages instead.

Right now, with the rapid growth of pension funds and the resulting pressure for investment outlets, the Board should be offering its long-term obligations in substantial volume with maturities and yields sufficiently attractive to make them preferable to insured or guaranteed mortgages. At the same time it should be encouraging member associations to borrow on a long-term basis in order to meet local mortgage demands.

Member associations with strong local demand for home-financing funds have had to raise their rate of dividend on all of their capital and increase their advertising budgets in order to raise even a portion of the needed funds. The resulting high cost of money many times has made it impossible for them to do the home financing at reasonable terms. If these associations could have obtained a fair proportion of their capital through long-term advances, their total costs of money would have been less.

(The advantage of being able to borrow money rather than raise dividend rates may need to be explained. An association with $100 million in share capital, paying 3 percent dividend, may wish to grow to $120 million in 1 year. To do so without borrowing it may have to raise its dividend rate to 3½ percent, which would mean a cost of new money of 6 percent—3½ percent dividend on the increased plus one-half percent increase in dividend on the original 100 million. Thus it could well afford to pay 4, 5, and even 6 percent on borrowed money and enjoy a somewhat lesser rate of savings growth.)

But other ways may be available for putting the proceeds of bank obligations into home mortgages, direct purchase of mortgages by the Federal home-loan banks or their affiliate being the most obvious. These possibilities need to be studied, and the banks neeed authority to make use of methods found to be appropriate. Until more careful study has been made, however, recommendations in this area are premature.

Fifth, the flow of funds into savings and loan associations, and into savings accounts of banks and other financial institutions, should be stimulated by all appropriate means, including the removal of present tax disadvantages. At present, no form of personal income is less favorably taxed than interest or dividends on savings account balances. The holder cannot even elect the year in which to take or report the income. There is no dividend credit, nor can any part of the income be considered as capital gain. The entire amount is subject to tax as ordinary income.

One possible solution that should be studied would be to permit savers to report interest or dividends on savings accounts only when withdrawn. Another suggestion worthy of studywould be to permit banks and savings and loan associations to pay income tax at a flat rate on all interest or dividends distributed and to make such interest or dividends tax free to the savers.

Other means for increasing the flow of funds into savings and loan associations might include the payment of higher rates of dividend on large balances not subject to immediate withdrawal than on regular accounts. This practice currently is prohibited for federally chartered associations, as is also the computation of dividends on average balances, and many other variations in operating practice that might be effective in bringing increases in savings capital in specific markets.

As in other areas of human behavior, research is needed in the savings habits of the American people. The Board should conduct or encourage such research, which again suggests the development and expansion of a professional research staff.

Sixth, the Board should cease trying to regulate each transaction an association enters into, and should endeavor instead to protect the public from loss through strict enforcement of adequate reserves for losses. The best illustration of this point is the arbitrary limitation—only recently relaxed—on the amount of each loan to 80 percent of the appraised value of the home. If 90 percent loans are safe enough for the Federal Government to insure (and a good case can be made that a portfolio of 90 percent loans actually is safer than one of 80 percent or less), then associations with reserves ought to be permitted to complete with the Government insured loans.

Government insurance should be reserved for loans that banks or savings and loan associations or other financial institutions are unwilling to make otherwise. To offer Government insurance on loans that otherwise would be unlawful merely creates a Government monopoly, and should not be tolerated.

A second illustration is the combination of rules that effectively prohibit an association from engaging in the financing of land development. As a result, associations are denied participation in the most important step in the home building process—determination of location. Restrictions of this kind very likely have the opposite result of that intended. Instead of association investments being safer they probably are less desirable. The best builders and land developers have no trouble placing their mortgages on completed properties, but they frequently need funds for land development. Associations now have little to offer them, hence do not have much chance of getting these most desirable mortgages when the properties are completed and sold.

Many other examples of strict enforcement of abritrary rules could be mentioned, but there would seem to be no need to do so. What associations need is a wider opportunity both for success and for failure—an opportunity to risk their accumulated reserves. They certainly should have as much freedom to make home loans as commercial banks have to make business or personal loans.

However, if the Board is to continue to pay close attention to the details of individual transactions, it should be just as much concerned with the failure of associations to meet home financing needs at reasonable terms as with practices that in the Board's opinion are unsafe. The holding of a charter, in my opinion, involves the obligation to serve home financing needs just as much as it does to provide a safe and convenient place for savings. Management that fails to serve its community as a source of home financing should be criticized and removed as freely as management that endangers the funds entrusted to it.

Seventh, the restrictions on conventional mortgage lending by commercial banks should be removed or lessened. The arbitrary limitation of mortgage portfolios to some percentage of savings accounts or of capital accounts, and especially the limitations on percentage of loan to value and on maturity tend to lessen bank participation in the home financing field. These limitations were imposed originally with the intent to protect depositors, on the unproved assumption that long-term mortgage loans were less safe, or that bankers had less skill in making these loans than other loans. There is no reason to believe that either of these assumptions is now valid. Furthermore, since depositors are amply protected by bank capital structures and by Federal insurance, the reason for such limitations no longer exists.

Banks should have as much freedom to make home-mortgage loans as they do to make business or consumer loans. Competition of banks in the conventional home mortgage field not only would be helpful to the programs administered by the Board but would also lessen the necessity for Government insurance or guaranty, without which banks cannot now compete effectively because of outdated restrictions.

SUMMARY OF RECOMMENDATIONS

In summary, Congress should (1) define the responsibilities of the Board in such a way as to assure a more positive and constructive attitude on the part of the Board in meeting home financing needs; (2) enlarge the membership and increase the prestige of the Board; (3) require the Board to develop an adequate research staff, making provision if necessary for assessing increased costs to member institutions; (4) insist that the Board make effective use of the tremendous borrowing power of the Federal home loan banks; (5) seek out ways, including the removal of present tax disadvantages, to stimulate the flow of savings into home financing institutions; (6) remove, and insist that the Board remove, arbitrary limitations on individual transactions of member institutions; and (7) remove, and insist that appropriate supervising agencies remove, present arbitrary limitations on home mortgage transactions entered into by commercial banks.

The effect of these recommendations would be to enable private financial institutions to meet home financing needs with a minimum of Government interference or subsidy, which in my opinion is the American way, and the best way, to get the job done.

A PROGRAM FOR THE FEDERAL HOME LOAN BANK SYSTEM DESIGNED TO IMPROVE THE DISTRIBUTION OF THE POOL OF CREDIT AVAILABLE FOR NEW RESIDENTIAL CONSTRUCTION

KURT F. FLEXNER, Associate Professor of Finance, New York University, New York, N. Y.

The following paper discusses the question:

> In what ways could the programs administered by the Federal Home Loan Bank Board be supplemented or modified to increase and to improve the distribution of the pool of credit available for new residential construction?

I. THE CREATION OF A SECONDARY MORTGAGE MARKET

In an effort to find ways by means of which the Federal Home Loan System can be improved so as to function more clearly in line with its stated objectives, one must be careful not to lose sight of the overall objectives of this Nation's economic and monetary policies. The people of this country with its vast resources in raw materials, highly productive capital and skilled labor, deserve good housing. But every effort must be made to make the financing of good housing consistent with economic stability. It should not, for example, be done in a way which would prove unduly inflationary. Inflation, like other forms of economic instability, tends to undermine the political and economic health of a nation.

The financing of housing, like the financing of government, industry, and agriculture creates a demand for the available supply of credit. The supply of credit is made up of two parts: savings out of past and current income and newly created money. An increase in the quantity of money in circulation or in its average turnover at the level of full or nearly full employment is, of course, inflationary.

The fear of inflation, which is in my opinion a wholesome reaction to a serious problem, should not be allowed, however, to discourage investment in housing unnecessarily. An increase in the supply of money is not the only way to make more housing credit available. There is in fact a better way, the more efficient use of the existing money supply.

Of the important instruments of finance, mortgage credit is the least efficiently organized. Unlike the other forms of long-term credit, it is local in character and lacks uniformity. This is not mere accident, but rather the result of historical economic development. The main attention of the American credit structure has historically been directed toward industry. Through the stock exchange and since 1913 the Federal Reserve System, American industry has had the advantage of an efficiently organized secondary market for its

short-term and long-term capital requirements. The absence of a properly developed secondary market in mortgage credit has not only proved a handicap to the housing industry, it has also made the financing of homes more dependent on new credit than it would have been if the existing supply of credit had been employed more efficiently through the use of secondary markets.

That this Nation has been aware of the need for better organization in the financing of housing, has been demonstrated at various times. In the early 1930's, partly the result of the depression and partly due to lack of organization, the mortgage debt created serious problems for debtor and creditor alike. Responding to the depressed conditions of the mortgage market, the Federal Government enacted a series of emergency measures. Most of these devices were either devoid of long-range objectives or, like the FHA and FNMA and the postwar VA guaranties, were burdened with rigidities which limited their usefulness in a basically free-market system.

The Federal Home Loan Bank System, unlike most of the emergency measures of the 1930's, was considerably more than mere "Government intervention." Its stated objectives are to facilitate home ownership through its powers to lend funds to its members, and to supply them with emergency credit during critical periods of unusual withdrawals.[1]

The Federal Home Loan Bank System was created in part to lend flexibility to home financing. The System's nonemergency advances to its members were intended to reallocate savings from areas in which they were relatively abundant to other areas in which there exists a shortage of savings relative to the demand for mortgages. To limit housing in a rapidly growing area to savings located in that area, while other areas accumulate idle savings, is undesirable from an economic point of view. The Federal Home Loan Bank System was intended to reallocate savings, but in its present form it is unnecessarily handicapped.

It is possible, in my opinion, to enable the System, by the use of appropriate legislation, to include in its operations the functions of a secondary market. Such a step would not only help to allocate savings in line with the demand for mortgages throughout the Nation, it would also give the conventional mortgage what it now sorely lacks—uniformity and a national market.

Although Government guaranteed FHA and VA mortgages and their purchases and sales by FNMA have provided a national market for a sector of the mortgage-finance industry, the limitations contained in these devices greatly restrict their potentials as a secondary mortgage market.

Of even greater importance is the complete lack of such a market for conventional mortgages. An attempt has been made to overcome this handicap by the use of the 50 percent participating purchase. This device is undoubtedly useful in shifting savings from one area to another, but there is a definite risk involved and its use must be, as it is now, limited.

At present the Federal home-loan banks can finance the advances they make to their members by 1 or more of 3 methods. In only one of these, however, are funds transferred from associations with ex-

[1] S. Rept. No. 837, 72d Cong., 1st sess., Washington, June 16, 1932.

cess cash to others with cash deficits in relation to their mortgage demands. This kind of reallocation occurs only when the Federal home-loan banks finance advances to members from the deposits which they hold. Their deposits, of course, belong to members with surplus cash. Even this device, however, is in no way related to a secondary mortgage market, and in addition suffers from other defects.

An association with surplus cash is usually not anxious to deposit it at a relatively low rate in the Federal home-loan bank of its district. Currently most associations with surplus cash are likely to prefer another alternative, the participating mortgage. Although this device transfers funds in accordance with market demand, its use is necessarily restricted by the element of risk involved. A New York association is simply not in the same position to judge risk in California, for example, as it is in its own area.

Federal home-loan banks cannot compete at present effectively for the deposits of its members. A bank cannot or will not pay a higher interest on the deposits of its members than what it would have to pay for floating an issue of its obligations, and this is not enough to attract deposits in large volume. The "internal" deposit device has, in fact, failed to redistribute savings among the 11 bank districts.

In the other two methods of financing the advances made to members, the idle funds contained within the System are not involved at all. These methods consist of selling the System's obligations to the public, and in the reduction of Treasury obligations held by the System. It is evident that every means should be employed for making use of idle funds within the System, before its own bonds are offered for sale. This is simply in line with the principle that the existing money supply should be used efficiently before pressures are created which lead to the creation of new money.

The financing of advances from the sale of Treasury obligations held by the Federal home-loan bank is, of course, greatly restricted by the relatively limited quantity of such obligations which the System can reasonably hold.

Although, a shortage of savings in terms of an existing demand for mortgages in a particular district can be remedied by a sale of Federal home-loan bank bonds to the public and to the commercial banks, this method as was emphasized above should not be employed so long as the money can be raised by a better use of the existing supply of mortgage credit. In this connection the creation of an effective secondary market for mortgages is a necessary step.

In the opinion of this writer the Federal Home Loan Bank System is ideally suited to perform the operations of a secondary market for its members. This is especially true since the Federal Reserve System has repeatedly stated that it is opposed to adopting selective credit devices. The Federal Home Loan Bank System is, furthermore, much better acquainted with the techniques of the mortgage market than the Federal Reserve System.

The objective of the secondary mortgage market would be to give the home mortgage a degree of uniformity and national marketability which up to now it has not enjoyed. This would not only result in a better use of available funds, but would attract to the mortgage

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market more funds than have previously been available. Funds that would otherwise be invested in private housing through the mortgage device are at present drawn to alternative types of investments as a result of the lack of organization in the mortgage market. Marketability is a prerequisite for making the mortgage more attractive to many potential institutional and private investors. A more attractive mortgage will reduce the need for public funds in providing good housing for the American people.

The Federal Home Loan Bank System's secondary market operations can be constructed along very simple lines. Its two major contributions to the mortgage industry should be the better use of available funds and the increased marketability of the mortgage. A simple model will help illustrate how this might be accomplished. The actual procedure will be divided into two parts. The first step involves a process which will increase the marketability of a conventional mortgage. The second step will put the existing supply of credit available for mortgages to better use.

Each member institution will have the right upon payment of a moderate fee to ask the proper official at its Federal home-loan bank to rate its conventional mortgages as soon as a loan is completed or at a convenient time thereafter. These mortgages will thus be reappraised in time with standards set up by the Board in Washington. The rating of each mortgage need only fall in 1 or 2 categories, A and B, for example. Mortgages rated A will be eligible for the secondary-market operations of the banks. Those rated B will not qualitfy for this purpose. This is not to say that a B mortgage is a bad mortgage, it is simply not suitable for national distribution.

This procedure will require a new department responsible to the Board. The function of this division will be to apply the criteria established by the Board to the rating of mortgages which may enter a national market.

The second step of the procedure should be carried out by the 11 district banks. Assuming, for example, that member associations in the second district hold more cash than they need or can profitably invest in their respective communities, and assuming that member associations in the 11th district are short of cash in relation to a legitimate mortgage demand the following steps should be taken by the banks and associations involved. An association in the 11th district will sell to its bank mortgages which have been given an A rating by the bank. These mortgages will then be sold by the Federal home-loan bank of the 11th district to the Federal home-loan bank of the 2d district.

The final step involves the ultimate purchase of these mortgages by some of the associations in the second district. Funds will thus be transferred from areas with surplus cash to areas short of cash relative to mortgage demands. This transfer will have been accomplished according to standards that meet the requirements of sound banking and market principles.

Since the price of credit in a free-market economy should be borne by the borrower, the costs involved in such transfers and in rating the mortgages should ultimately be charged to the homeowner in whose behalf these expenses are incurred.

This plan, in addition to providing an important secondary market for the mortgage industry, actually increases the liquidity position of the associations. The relationship between liquidity and the marketability of assets is, of course, obvious. Although in times of economic crises, the Federal home-loan banks should be able to generate the liquidity required for possible withdrawals, liquidity is needed for two other purposes: To meet the requirements of normal banking operations and for changing the structure of the investment portfolio when market conditions warrant such changes.

Cash liquidity is expensive and competes only too frequently, therefore, with loss reserve ratios and the quality of the mortgage portfolio. The liquidity obtained through a properly functioning secondary market costs little and is, therefore, a much sounder device than cash, beyond a nominal ratio.

II. THE FEDERAL HOME-LOAN BANKS AND LONG-TERM CREDIT

Under certain conditions it will not be possible to transfer funds in the manner suggested in the preceding section. One case in point would be a new community currently undergoing economic development at a rapid pace as a result of the emergence of a new industry or industries involving the construction of new factories, transportation facilities, service industries, trade outlets, etc. The construction of homes and other forms of shelter cannot wait, of course, for the time that savings will provide the necessary credit in the community. Nor can they sell existing mortgages for the "cash pockets" which may exist elsewhere in the Nation, since such mortgages do not yet exist, and won't for some time, in large enough quantities. Under such conditions the Federal Home Loan Bank System can help by providing the necessary credit. Since mortgage loans are made under long-term contracts, such credit should ideally also be on a medium or long-term basis.

The preceding example is, of course, not the only instance in which long-term Federal home loan bank credit is desirable. The legitimate demand for housing and, therefore, mortgage credit may be very acute in a particular area. The supply of savings which are available for mortgages in the area may be inadequate. Savings associations elsewhere may not be willing or able to buy existing mortgages from that area even after a secondary market is established for this purpose. There may, however, be available funds that could be tapped for mortgage credit. These funds can be reached through the sale of Federal home-loan bonds. Needless to say, a legitimate demand for housing cannot be ignored by private lending institutions, for the alternative is an increase in public housing.

At present, Federal home-loan banks differ widely in their policies in regard to long term credit. Although, the problem of inflation requires that the System float its bonds with considerable regard for national economic policy, it must nevertheless finance advances to its members by this means when funds available for private housing are otherwise inadequate for meeting a legitimate demand.

In only 4 of the 11 banks is long-term credit (10 years) available at present. In four banks no long-term credit is available at all. In the remaining 3 the terms vary from 3 to 5 years. In the seven banks grant-

ing such credit, the interest rate charged is subject to an escalator clause which gives a bank the right to raise the rate up to 1 percent per year during the life of the advance to a maximum of 6 percent.

The whole question of the sale of obligations by a Government agency for the purpose of aiding a special sector of the economy is, of course, a problem for the public to decide. It is definitely a political and not an economic question. It should be borne in mind, however, that the public attitude toward housing is one of alternatives now. If private housing can't do the job, then the public is willing to ask for public housing. It is in this light that the problem of long-term Federal home-loan advances should be viewed.

Since the sale of Federal home-loan bank bonds gives to housing a special privilege, the use of this device must always be in the public interest. So long as this type of credit is used, however, it should be based on sound economic principles.

Long-term loans (up to 10 years) should be available in all 11 districts. Overall policy in regard to such credit should be made by the Board, although the banks should set the rates for their district in accordance with existing regional differences. All the districts deserve equal treatment so far as basic policy is concerned, and there is neither logic nor reason behind the present differences in regard to basic policy in the 11 districts.

The current use of the escalator clause in rates on long-term advances creates unnecessary problems for the associations. If the principle of a 10 year advance is accepted the rate to maturity should be known in advance. A corporation borrowing public funds through the sale of bonds knows what it will have to pay until maturity. It could not operate economically otherwise.

An association borrowing on a 10-year term invests the funds obtained from long-term advances in long-term mortgages at fixed interest rate. If the rate on its advances is increased after a year, its income and consequently its loss reserves will suffer. The Federal home-loan banks should not attempt to protect their own profits by jeopardizing the operations of the member associations. To assure equal and sound treatment in all the districts the Board must be willing and able to determine basic policy. At present this is not the case.

The creation of an effective secondary market and the development of constructive policy in regard to long-term advances will go a long way in facilitating housing credit without creating an undue strain on the economy.

CHANGES IN FEDERAL HOME LOAN BANK PROGRAMS

ROBINSON NEWCOMB, Economic Consultant, Washington, D. C.

The following question is discussed in this memorandum:

> In what ways could the programs administered by the Federal Home Loan Bank Board be supplemented or modified to increase and to improve the distribution of the pool of credit available for new residential construction?

The Home Loan Bank System, like the Federal Housing Administration, was created during a period of serious financial strain. It was designed to protect shareholders and depositors during a period of general stagnation. Major changes have been made in the Federal Housing Administration to fit it for a prosperous, growing economy. Similar changes have not been made in the home-loan bank. As Mr. Colean has told you, important changes still are needed in the Federal Housing Administration, despite the many that already have been made. But the home-loan bank has far to go to even catch up with the present Federal Housing Administration. The Home Loan Bank System is still largely dependent upon local sources of savings. It has scarcely begun to tap the long-term national money markets—its total borrowings there are under a half billion dollars. It has only within the last month permitted up to 10 percent of mortgages to be made for as much as 90 percent of appraisal. It is not, even today, doing anything to further research into title or foreclosure costs, or into cutting housing costs or improving home-building techniques or housing standards. It has not signed even one contract with the building research advisory board of the Academy of Sciences. It has yet to even open negotiations for one study. Other agencies, including the Federal Housing Administration, have signed many contracts with the Academy of Sciences. The Home Loan Bank System is still operating much as it did 20 years ago. If today's staff were to be transplanted back 20 years in time, or the staff of 20 years ago had been moved forward 20 years in time, either would have felt very much at home.

Steadfastness of purpose is a valuable trait. But the ability to keep abreast of the times in the use of means toward a steady purpose is also not without value.

I believe the Home Loan Bank Board could adopt a more modern approach and more modern instruments to the advantage of the country, of homeowners, and of lenders.

Many specific recommendations have been and are being made to this committee on this subject, so I will confine my comments to three possibilities for very significant improvement in the Home Loan Bank System. If these three improvements can be achieved, many of the smaller matters will be taken care of almost automatically. The three

are in the fields of (1) tapping savings, (2) loaning funds, and (3) confining actions to general policy and supervision, rather than detail administration.

Savings and loan associations still rely on local small savings accounts for probably 95 percent of their funds. In the 1930's most individuals saved through insured deposits in banks and savings and loans. As late as 1939, nearly 75 percent of the reported net financial savings of individuals was in these forms. If savings through Government pensions and insurance are not included, most personal savings made as late as 1939 were in the form of deposits or of Government securities. But, in the boom housing year of 1955, savings deposits in banks and savings and loans accounted for only about 40 percent of gross individual financial saving. Private insurance and pension funds accounted for about a third of the total. The Federal Housing Administration and the Veterans' Administration systems tapped these insurance funds to the tune of about $2 billion. The Home Loan Bank System used only about $700 million from these sources in that year. The home-loan bank actually paid off $150 million of these loans in 1956 and 1957, while Federal Housing Administration and Veterans' Administration holdings by insurance companies alone increased over $2 billion.

Mutual investment, insurance, and pension funds are becoming increasingly important channels for private saving. Savings and loans are becoming less important channels. This is understandable. Savings and loans invest only in debt, and in debt of only one type. They do not invest in equities. Creditors of savings and loans are protected up to $10,000 in current dollars, but are not protected in dollars of constant value. As incomes and as sophistication rise, increased attention is naturally given to equities as against debt as a source of investment, so savings and loans are handicapped.

Mutual investment, insurance, and even pension funds can and do invest in varying degrees in equities. But most of these pools of capital tend to want at least some debt. They can afford to invest varying proportions of their capital in mortgages or in paper backed by mortgages. As their importance in the economy grows and as the relative importance of deposits or shares in savings and loans declines, savings and loans should be able to offer paper backed by mortgages or other security to these funds. Savings and loans should have ready access to such markets so they could continue to provide mortgage money to homeowners, even though savers shift to more diversified forms of investment.

It would be easy for savings and loans to tap central savings pools, either directly or through secondary markets. An elimination of the $10,000 limit on insurance, at least for accounts left for periods of possibly 5 years or more, would be a simple device. At present, individuals or corporations may deposit in several associations and secure the benefit of insurance on larger amounts than $10,000. And they can give notice of intention to withdraw at any time. So, the savings and loans must carry reserves to protect against unannounced withdrawals. Such reserves reduce the amount of funds available for mortgages, and usually reduce earnings, too. On the other hand, large institutions which prefer to lend in multiples of a million dollars for fixed periods are usually not interested in checking the reliability

of large numbers of savings and loans and in handling the bookkeeping incident to a large number of $10,000 accounts. So they put relatively little money directly in savings and loans.

The difference in cost to a savings and loan of servicing accounts averaging $1,000 apiece, and subject to call, and of servicing accounts of $1 million, not subject to call, has been estimated at between one-fourth and one-half percent. A savings and loan now paying 3½ percent for ordinary accounts would be better off paying 3¾–4 percent for large amounts of long-term funds. And it could put a larger proportion of funds secured by such large loans in mortgages.

A second and possibly even simpler method than insuring large time deposits, made for periods of several years at a minimum, would be that of borrowing on long-term notes directly from pension or other funds. A note for 10 years properly signed by an insured savings and loan association would have a security equal to or better than that secured by a straight depositor. Should the savings and loan fail to pay the note, the Insurance Corporation would have to move in to protect the shareholders and would have to pay off the note before it could act for the shareholders.

This is a very simple device. It would not require legislation. A simple regulation by the Board authorizing insured institutions to borrow 30 to 50 percent of their share capital on notes with maturities of 5 or more years would make central savings pools of capital available to savings and loans.

However, a regulation making this possible would not be as effective as legislation giving the right to do this to savings and loans. A regulation tends to be viewed as a privilege which may be withdrawn. Both potential borrowers and potential lenders might be afraid that the privilege of making long-term loans would be withdrawn and that it would be better not to take a chance. Many remember vividly what the home-loan bank did on September 7, 1955. With the view so prevalent in Washington that housing is something that could and should be controlled, a regulation of this type could be used to turn savings and loan loans on and off as Federal Housing Administration has been turned on and off.

It is my particular prejudice or myopia that the housing market should be given an access to funds at all times equal to that of other claimants. If people don't want as many houses in 1959 as in 1958, let them say so. I don't like to have Washington officials at either end of the Avenue say the people should have fewer houses this year or more next. Government officials cannot tell General Electric or General Motors or General Telephone to build more or less from year to year. Government officials can make the money market as a whole tighter or easier. That, it is my prejudice to feel, is enough power to give officials in a democratic country. From that point on let the people, by way they vote their dollars, decide where or when they want to cut back or expand—in housing, in cars, in equipment, or what have you. Don't let Washington make that decision.

The effects of Government influence on home building may be illustrated by what happened in 1956–57. The volume of federally aided mortgage financing for new construction (by Federal Housing Administration and Veterans' Administration mortgages) dropped 56 percent, and the writing of savings-and-loan mortgages for new construc-

tion dropped 21 percent. The volume of savings and loan mortgage writing for other purposes dropped 14 percent. But other conventional lending for new construction rose. Only federally influenced or controlled mortgage writing for new construction was lower in 1957 than in 1955. New construction mortgage writing relatively far removed from the power of Washington rose in 1956–57.

Those who believe, and honestly, that Government officials, usually appointed officials, should have the power to control the volume of housing will believe that any authority for savings and loans to borrow should be given by regulation only, not by law. This is a viewpoint that is held strongly by many, on the ground that instability in the housing market helps offset instability in other markets, and so makes the total more even. They believe it is fortunate that residential construction was curtailed in 1956–57. This view is widely and honestly held. It is certainly a debatable proposition, and it is a view I am willing to debate at length. It is responsible for some of the great fluctuations in the housing volume in the last 3 years. But I think it a dangerous view, one which can cost homeowners dearly. So, I would prefer that savings and loans be given the power to borrow by law rather than regulation.

A third device for increasing the availability of funds would be the sale of certificates of ownership of rights to mortgages, with some form of guaranty by private associations of savings and loans, or by regional or the Washington Home Loan Bank Board. This method of developing secondary markets would require the development of a new insurance mechanism, which would take time and cost money, and it would require a reliance upon governmental action. If it is believed that governmental agencies should have the power to turn the spigot on or off for most home mortgages, such a Home Loan Bank Board operation would appear a simple and reasonable method. If governmental control over volume is not deemed desirable, this method would appear less satisfactory unless it were done voluntarily, with legal sanction, by savings and loans, or associations of savings and loans, on a private basis.

If governmental control appears desirable, another simple method of making additional funds available would be for the Home Loan Bank Board to expand its sale of long-term paper. The bank has not sold much long-term paper. It has not become skilled in the business. But it could become skilled. However, many savings and loans would hesitate to put themselves in heavy debt to the system. It would take time for savings and loans to accept the domination inherent in heavy indebtedness to a Government agency.

But whatever the method used and whether it is handled privately or by the Government, new sources of funds would seem imperative if savings and loans are to continue to finance their past share of a growing housing market, and interest rates on mortgages are not to rise relative to other rates.

The second major problem is that of developing better methods and policies of lending. Savings and loans were leaders of the field 30 years ago. They were making amortized mortgages when most of the industry was writing straight short-term mortgages, without monthly curtail. But now the industry takes amortized mortgages for granted. It makes provision for monthly payments toward insurance, taxes,

and even maintenance bills. And through the leadership of the Federal Housing Administration and Veterans' Administration, the industry has learned that 90 or 95 percent mortgages can be safe—98 percent of the people are honest. And once they buy a home they want to improve it. It is their home and they want to make it a good home. So even if the original mortgage was a 95 percent mortgage, it is not long before the improvements the family has made make the mortgage a 90 percent, or an 85 percent loan.

Even the 2 percent who are less honest generally find it to their interest to keep up the mortgage. So a well managed mortgage business handling 90 percent or 95 percent mortgages has few losses.

But the savings and loans business has not learned this officially. Actually, it makes such mortgages under the table. It has to compete with the Federal Housing Administration if it is to finance new construction effectively. But it has not done so openly, freely, competitively. However, last month the Board authorized a small amount of 90 percent loans. This is an excellent beginning. But it is only a very small beginning. Savings and loans should be just as able, and as willing, to make 90 percent loans as are mortgage men making FHA loans.

Just as savings and loans should not be dependent upon one source of funds, that of local individual savers, they should not be dependent upon one outlet for their investment, home mortgages. A century ago, when savings and loans were getting started, the one large debt a family willingly contracted was a mortgage. Savings and loans were developed to help make this mortgage writing possible. But now families borrow far more each year for other purposes than they do for housing. Savings and loans have not kept abreast of this growth in family needs for credit. Both to serve their communities better, and to balance their portfolios, savings and loans should be authorized to loan on a broad range of personal short term as well as long-term paper. Savings and loans also should be able to buy local government debt. And they should be able to help finance the development of subdivisions or tracts. In this day and age houses are no longer commonly built on undeveloped land which is later improved through special assessment bonds. Today streets and utilities are put in first, then houses are sold. When savings and loans were first organized it was not necessary to finance such operations in advance of homebuilding. Now it is. But here, too, the powers of savings and loans have not kept abreast of developments.

The third major problem is that of reassessing the function of the Board and the System itself. Today the Board is heavily concerned with routine operations. It even passes on each application that a Federal association may file for a new branch. And the Insurance Corporation is reported to question detailed operations of associations which have demonstrated their soundness and have large reserves. Some of the regional banks ask member savings and loans to handle all dispersal of funds on loans, savings accounts, expenses, etc., through the regional bank rather than through the local commercial banks. Such attention to detail, and interference with normal business operations, is undesirable.

The Board should be a top policy center like the Federal Reserve Board, free from indirect pressure by the Budget Bureau or by the patronage secretary in the White House.

A preliminary hearing such as this may not be the place to suggest how such a policy of increasing the stature and lessening the pressure of detail for the Home Loan Bank Board could be handled. The committee will be flooded with suggestions. But the principle should be emphasized that savings and loans no longer need to be wet nursed as was sometimes the case 20 years ago. They should now be treated as responsible members of an adult society. An industry whose assets now approximate $53 billion should no longer be supervised by a Board whose function is regulation, whose days are filled not with policy but with detail. The Board can rise to this challenge. It should be allowed to do so.

Savings and loans evolved in the 19th century and through the second decade of the 20th century with the changing economy and bodies politic. This evolution was understandably checked by the passage of Federal legislation, primarily the Home Loan Bank Act, nearly 25 years ago. This legislation froze policies and practices in the molds of the 1930's, and under the pressure of depression fears. Savings and loans now need to be adapted to the challenges of the 1960's, not to the problems of the 1930's. They need to be able to tap new pools of money, and to have new avenues of investment. And they should be supervised by a reinvigorated Board divorced from politics, but wedded to the homebuilding and financing industry, by a Board freed from routine chores, but charged with the responsibility of developing and broadly enforcing policy. This is a challenge, but one that can be met.

INCREASING CREDIT FOR NEW CONSTRUCTION

NEAL J. HARDY, Director, National Housing Center, Washington, D. C.

The questions assigned to the writer and on which this paper is based read as follows:

> In what ways could the programs administered by the Federal Housing Administration, the Veterans' Administration, and the Federal National Mortgage Association be supplemented or modified to increase and to improve the distribution of the pool of credit available for new residential construction? What can be expected from FHA's certified agency program as a factor to change the size and distribution of this pool of credit?

In considering the problem of increasing and improving the distribution of the pool of credit available for new residential construction, the question of mortgage interest rates on FHA and VA loans would appear to demand first attention.

In discussing this issue, it may prove helpful to review briefly the experience to date with this knotty problem. During the original congressional debates preceding the passage of the National Housing Act in 1934, considerable attention was given to the whole question of interest rates. Then, as today, opinion varied all the way from proposals to fix maximum interest rates by statute at a permanently low level to reliance on the usury laws of the respective States. The final decision of the Congress was to establish a ceiling figure of 6 percent beyond which the interest rate on FHA loans could not go, and the Federal Housing Commissioner (then Administrator) was given the responsibility to establish maximum interest rates from time to time on the basis of prevailing market decisions. It was the intention of the Congress that rates should be established at fair levels which would provide a reasonably steady flow of funds into the insured-mortgage system on a basis which avoided unwarranted premiums on the one hand and heavy discounts on the other.

With the passage of the GI home-loan program in 1944, a different approach was adopted and a ceiling interest rate of 4 percent was written into the basic law. Since at that time the FHA rate was also 4 percent and this rate was adequate to attract private savings into both insured and guaranteed mortgages, no particular problem was encountered. After World War II, however, when housing production was substantially increased and the demands for long-term investment funds from other sectors of the economy grew significantly, a fixed interest rate of 4 percent became less and less attractive to those private lenders who began to enjoy an increasing degree of choice in their investment decisions. After the famous Treasury-Federal Reserve accord and the abandonment of a basic Federal policy of maintaining interest rates at low levels, this entire problem became

intensified. Increasingly, in the years which have followed, during periods of so-called tight money, fixed interest rate FHA and VA loans have been disadvantaged in the competition for funds in the market place. This has been true despite the fact that maximum contract interest rates in both programs have been increased on several occasions and discounts of a magnitude unknown, and, in fact, prohibited for many years in the FHA program, have been allowed.

Currently, the problem is further complicated by the statutory requirement that the VA rate must be pegged at a one-half point below the FHA rate. There are many who argue that the security behind a GI loan should be worth at least a one-half point to an investor as compared with an FHA loan. Regardless of the possible merits of this argument, the unavoidable fact of the matter is that private investors do not so evaluate the two types of insured and guaranteed loans. The result is reflected, by and large, in substantially higher discounts on GI loans which carry a lower contract rate of interest.

All of this experience would seem strongly to indicate that the original decision of the Congress in establishing the interest-rate formula, which still controls the FHA program, was a wise one. It is, therefore, suggested that serious consideration be given to adopting this same formula for the VA program; that is, the establishment of a ceiling rate, with complementary administrative authority in the hands of those responsible for the VA program to establish rates from time to time at levels dictated by conditions in the money market. It would further appear necessary as a practical matter to provide that the administratively established maximum interest rates for both FHA and VA loans should be established at the same level and should move either upward or downward simultaneously.

This suggestion does not go as far as many experts would like to see. There is a considerable body of opinion which holds that if FHA and VA mortgages were free of any interest-rate control these securities could compete freely with competitive investments in the private market. The writer doubts whether the solution to the problem of increasing the availability of mortgage money can be so simply stated. Experience on several occasions during the last 4 or 5 years would seem strongly to indicate that even when the effective yield on FHA and VA loans has been substantial, due to the charging of extremely heavy discounts, private funds still tend to move into alternative and still more attractive long-term investments. This is simply another way of saying that, during a period of capital shortage and the imposition of monetary controls, those areas hit first and most severely are housing, small business, generally, and local-government financing.

Further discussion of this situation is not germane to the specific question to which this paper is addressed, but it is important to recognize that interest-rate adjustments alone will not remove all of the barriers to mortgage investment in the volume which will undoubtedly be required if the housing demands of the next decade are to be met. On the other hand, reasonable freedom to establish maximum interest rates on FHA and VA loans in the light of shifting market conditions would seem to be a reasonable and necessary condition precedent to other actions herein suggested.

It is assumed that the question on which this paper is based contemplates that means can be developed to attract a larger proportion

of the existing long-term private savings of the country into the FHA and VA program and, more particularly, into the new residential construction financed under those programs. If this assumption is correct, it is worthwhile to review briefly the composition of the private long-term savings in this country and to examine briefly some of the impediments to the investment of a greater share of those savings resources in insured and guaranteed mortgages.

Currently, almost all of the money which is invested in mortgages comes from those institutions which are trustees of private savings and which, by experience, are peculiarly fitted to acquire and service this type of investment. These institutions represent, of course, the savings and loan associations, life insurance companies, savings banks, and, to a lesser degree, mortgage companies and commercial banks.

The savings and loan associations are really the only institutions in this country whose business is almost entirely devoted to lending on mortgages. Life insurance companies and savings banks, the other two principal institutional investors in mortgages, have considerably more flexibility in the decisions they make as to the extent to which, at any point in time, they will invest their resources in mortgages, since the laws under which they operate give them a much broader investment base than is true of savings and loan associations.

Even more significant in an analysis of our savings resources than the institutional factors just mentioned is the substantially changed complexion of the long-term savings resources of the American people as compared with the situation which prevailed even 25 years ago. I refer, of course, to the fact that the savings held in pension funds and trusts have grown to a point where they now represent a significant share of our total savings, and there is every indication that this trend will continue in the years ahead.

Savings held in pension funds find the long-term amortized mortgage a peculiarly unattractive investment as compared with conservative coupon securities. The investment of savings in mortgages, particularly FHA and VA mortgages, requires the investor either to go into the business of servicing such mortgages directly or to contract with responsible servicing agents to perform this task. We are confronted with the plain fact that the long-term monthly amortized mortgage which has proved such a tremendously successful debt instrument to the borrower and has been largely responsible for the growth of homeownership in this country, has become an awkward and difficult type of investment to the management of an increasing share of our private savings. Expressed very simply, the trust officers responsible for the management and investment of pension funds are not attracted to FHA and VA mortgages which, by their terms, require the constant reinvestment of monthly principal repayment and monthly servicing of borrowers' accounts, particularly when alternative coupon securities have for the last several years been available at extremely attractive rates.

It was to meet this situation that the Federal National Mortgage Association was created, although to date it has made no very substantial progress in performing the task of selling coupon securities to private investors and using the proceeds of those debenture sales for the purchase of FHA and VA loans. It is suggested that serious consideration be given to a substantial expansion in the secondary

market activities of the Federal National Mortgage Association. In making this suggestion it should be emphasized that the Federal National Mortgage Association will be considerably handicapped in carrying out any very greatly expanded activity unless action is first taken to make certain that the contract interest rates on FHA and VA loans are set at levels which recognize conditions in the market. Unless this is done the Federal National Mortgage Association will be in the impossible situation of attempting to issue its own obligations on a market which will require the payment of prevailing interest rates without the opportunity of investing the proceeds of such debenture sales in mortgages carrying a sufficiently higher yield to allow the association to operate on at least a break-even basis.

The writer would like to emphasize most strongly that in his opinion the Federal National Mortgage Association has been operated with great skill given the prevailing conditions and limitations with which it has had to contend. The suggestions which follow are therefore directed to making it possible for the Federal National Mortgage Association to do a more aggressive job of providing a type of investment security backed by Government insured and guaranteed mortgages, thus furnishing the means by which an increasing share of our private savings resources can be invested indirectly in insured and guaranteed mortgages.

The Federal National Mortgage Association has already demonstrated in a limited way that it can successfully market its own obligations in the private market at reasonable rates and for varying terms. If the association is to expand its activities in this direction at least two things will probably be necessary. First, the association should probably be given a larger capital structure in order to increase its debenture issuing power. Secondly, an aggressive policy must be instituted of operating the association as the device by which insured and guaranteed mortgages can be accumulated and held as a basic portfolio against which debentures of both short and relatively long term can be issued to pension funds, private investors, and institutions not equipped to go into the business of owning and servicing mortgages.

Consideration should also be given to authorizing the Federal National Mortgage Association to lend on the security of insured and guaranteed mortgage collateral. The Home Loan Bank System has been successfully operated since 1932 as a reserve credit institution for savings and loan associations. In a practical sense its facilities are not available to nonsavings and loan lenders and a similar service is therefore lacking for such institutions as commercial banks, savings banks, and mortgage companies. It is not suggested that such credit would be extended by the Federal National Mortgage Association on a basis which would monetize long-term mortgage investments. If the association were empowered, however, to advance relatively short-term loans up to a reasonable percentage of the unpaid balance of insured and guaranteed mortgages held by commercial banks, for example, there is good reason to believe that these institutions would be more willing to use the authority already granted them to invest a reasonable proportion of their savings resources in such mortgages.

There is one major consideration which should be discussed very briefly in view of the terms of the question on which this paper is based. The major question asks in essence how the FHA, VA, and

FNMA programs can be supplemented or modified to increase and to improve the distribution of credit available for new residential construction. If we assume that under the best of all possible conditions there is still a limit on the total supply of private investment capital available at any point in time for investment in insured and guaranteed mortgages, then we cannot escape the fact that one means for increasing the share of that credit which goes to new construction is to decrease the attractiveness of similar investment in mortgages on existing construction.

For a period of some years the FHA terms on new construction were considerably more liberal than they were for loans made on existing construction. Since 1954 this has not been the case. There is a substantial body of opinion which holds that the decision to extend the same FHA terms to both new and existing construction was a sound and wise one in view of the fact that only a small percentage of our people can, in practical fact, purchase new homes and that our existing stock of housing must always be relied on to meet a major share of the housing needs of our people. By the same token, there can be no question but that the insurance of liberal, high-ratio loans on existing construction consumes some percentage, probably not inconsiderable, of the funds which would otherwise be available to finance the increasing production of new homes. There is also an argument of some merit which can be made that the availability of liberal insured mortgages on older homes has a tendency to prevent price declines on such properties which otherwise might occur.

This whole question raises a somewhat difficult choice to which an answer can be given only in terms of a decision as to whether, given a limited supply of private capital, it is more important to use that capital without distinction for the purchase of homes or whether a greater proportion of a limited supply should be diverted to the construction of new homes. The writer tends to believe that in view of the growth, both present and anticipated, of American urban communities and the very substantial expected increase in the number of urban households we would be thoroughly justified in giving the credit advantage to new home construction, since it seems obvious that unless greater progress is made in adding to the American housing supply our basic housing problem will become aggravated, not diminished.

FHA'S CERTIFIED AGENCY PROGRAM

The second question to which this paper is addressed asks what can be expected from FHA's certified agency program as a factor to change the size and distribution of the pool of credit available for new residential construction.

Certainly, the objectives of the certified agency program are meritorious. It is designed to make it possible for FHA insured loans to be made in small communities and rural areas which have largely been bypassed throughout the entire operating experience of FHA. Certainly, any Federal program like the insured-mortgage program should be available to both lenders and borrowers without regard to their geographical location. The certified agency program is based on the delegation of certain FHA functions to private lending institutions and to the use of fee appraisers to carry out mortgage valua-

tion responsibilities. If appropriate safeguards are instituted to make certain that these delegated responsibilities are wisely discharged the certified agency program should prove successful in increasing the amount of insured mortgage lending in neglected parts of the country. Such safeguards, however, are fundamental and necessary to a successful certified agency program, for delegation of the power to establish valuations and to insure mortgages can readily be abused to a point where the whole constructive purpose of the certified agency program is destroyed. Scattered reports of such abuses have already occurred which are, in the writer's opinion, sufficient to suggest a very careful postreview of actions taken under the certified agency program to insure that the interests of both the FHA and the borrower are adequately protected.

The argument will no doubt be made by many that one of the principal reasons why the FHA has been unable to extend its services to lenders and borrowers in small communities has been the excessive cost of handling insurance applications in such localities. The writer ventures two observations in answer to this argument. In the first place, the FHA was established to create a national system of insured mortgages. The fact that the insurance of certain risks, in the initial instance, is more expensive than in other cases would seem to be a necessary part of the cost of operating such a national system. Indeed, it must certainly be true that in the case of private insurance activities—life, fire, casualty, etc.—there must be a fairly wide spread in the cost of insuring individual risks. Yet, every insurance company apparently assumes that it is good business to extend its risk coverage as widely as possible and no doubt averages its cost of placing the insurance on its books in order to accommodate all the clients it can get. There would seem to be no reason why the FHA could not adopt the same philosophy.

If, however, this approach does not prove acceptable there is a relatively simple device which could be considered to make certain that CAP cases were handled with due prudence. If it is appropriate for the FHA to delegate decision-making authority to individual institutions without independent review it would seem perfectly reasonable to require such institutions to insure CAP mortgages on a coinsurance basis, agreeing to assume a reasonable percentage of any insurance loss which might occur. Such a system would give the institution the advantage of insurance over a major proportion of the risk assumed but would at the same time require the assumption of a sufficient degree of risk to impel the observance of reasonable valuation, credit, and other lending standards.

A MORE EFFECTIVE MORTGAGE INSURANCE SYSTEM

MILES L. COLEAN, Economic Consultant, Washington, D. C.

This paper is directed to the following specific questions assigned to me:

> In what ways could the programs administered by the Federal Housing Administration, the Veterans' Administration, and the Federal National Mortgage Association be supplemented or modified to increase and to improve the distribution of the pool of credit available for new residential construction? What can be expected from Federal Housing Administration's certified agency program as a factor to change the size and distribution of this pool of credit?

The phrasing of these questions suggests that the volume of credit for new residential construction is considered to be inadequate and that improvements are felt to be needed in the distribution of whatever volume of credit may be available. These suppositions are difficult to prove or to disprove with any finality.

My view is that, aside from artificial impediments to the flow of funds, which will be discussed later on, and possibly from certain institutional deficiencies, the residential mortgage market during the time since World War II has not on the whole been badly served. At the same time, I believe it may be safely asserted that there is something to be desired in the manner in which mortgage funds are distributed both by locality and in point of time.

I. THE QUESTION OF ADEQUACY

The flow of funds for residential mortgages, compared with that for other forms of private debt investment, gives at least some measure of the adequacy of the supply of funds for this type of financing. Except for a dip during the depression years 1929 to 1933, the proportion of total private, long-term debt represented by nonfarm residential mortgages has steadily risen from 28.3 percent in 1929 to 48.9 percent in 1957, the debt on 1- to 4-family structures accounting for the bulk of the increase (see table 109). During that period the increase in the dollar volume of outstanding residential mortgage debt was $96.4 billion (387 percent), while the outstanding volume of other private long-term debt increased only $63.7 billion (101 percent). As of the end of 1957, the outstanding volume of all residential mortgage debt was $121.3 billion; of home mortgage debt, $107.6 billion; and all other private debt, $126.9 billion.

Whether or not this dramatic increase in investment in residential mortgages to the huge present total provided an "adequate" supply in some abstract sense is a matter of subjective judgment on which I shall not venture an opinion. It is clearly evident, however, that from the point of view of effectively obtaining an increasingly dominant share of the funds available for all types of private long-term invest-

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ment, the mortgage market has fared very well indeed. There may in fact be some basis for arguing that, because of the special competitive advantages that Government has given the mortgage market, other claimants for long-term funds have been unduly stinted in the availability of funds for their purposes.

The importance of Government action in giving residential mortgages their paramount place in the market is unquestionable. The Home Owners Loan Corporation played a crucial part in stopping a 4-year decline in residential mortgage debt and in bringing about an upturn in 1933. In the years from 1934 to 1941 the insured mortgage system of the Federal Housing Administration was influential in bringing about a gradual improvement of the position of residential debt and of maintaining its level and further improving its relative status during the war years. The most spectacular shifts in the dollar volume and the relative position of residential debt, however, came in the postwar period, following the creation of the home loan guaranty system of the Veterans' Administration.

In 1945, before the VA operation had got well underway, the outstanding amount of insured and guaranteed mortgages was $4.3 billion and comprised only 23.1 percent of all residential mortgage debt. By 1957 the outstanding volume was $47.2 billion and the proportion had increased to 43.8 percent. (See table 110.) The dollar volume of noninsured, nonguaranteed residential mortgages also had a substantial growth during the postwar period, from $14.3 billion in 1945 to $60.4 billion in 1957, but its growth was far less spectacular than that in the Government-sponsored area.

In view of these developments, a case can be made that residential mortgage financing, whether or not made under Government auspices, has obtained during the postwar period, if not an "adequate," certainly a preeminent share of the total available supply of long-term funds. If the volume of mortgage funds is not adequate, the lack, on the face of it, is not due to any inability on the part of mortgage financing to capture an increasing share in the total, but rather a shortage in the total supply itself.

The possible means, if any, that might be developed for increasing the total supply of long-term funds is a subject beyond the scope of this paper. It is enough to note here that, in the long run, the size of the supply of such funds is limited by the savings of the people. An invocation of money magic in an effort to augment the funds that can be obtained through true savings produces the illusion rather than the reality of greater availability, for all such efforts get down merely to an increase in bank credit, a device that may be used only to a limited degree without risking an inflationary increase in the money supply. At several times during the postwar years, magical formulas, such as the pegging of Government bond prices and the pouring of Treasury funds into the Federal National Mortgage Association, have been used in the effort to find a substitute for savings; and the results have contributed to the considerable loss in the value of the dollar during the periods affected.

Actually, the great increase in the dollar amount of home financing (and perhaps to some degree also in its proportion to the total of private investment) is much affected by the postwar inflation, which produced a 41.4 percent rise in residential building costs between 1945

and 1957 (see table 111). The Federal Home Loan Bank Board estimates that at least 20 percent of the outstanding amount of home mortgage debt in 1957 resulted from inflation above average dollar values in the years 1947–49 (see table 112). Since the Board's constant dollar figures are adjusted on the basis of the Consumer Price Index rather than on that of building and land costs, they unquestionably understate the true extent of the inflation.

It also appears to have been sometimes supposed that the supply of funds for residential mortgages can be increased in times of a general shortage of investment funds by liberalizing the terms of borrowing. Such revisions in terms on section 203 mortgages were made, for example, in December 1956, March 1957, and August 1957. Contrary to this view, such actions only increase the pressure of demand without in any way affecting the supply, and contribute in this way to the increase in the cost of money and the inflation of land prices and construction costs.

In summary it may be concluded that, during the postwar period, residential mortgage finance has achieved a predominant position in relation to total private long-term debt, and that this result has been in considerable degree due to the activities of Government-sponsored agencies. It also seems fair to conclude that efforts to reach this goal have at times resulted in overstimulus of demand and resort to an expansion of credit in excess of savings that have added their weight to the inflationary pressures present during most of the period. It is hard to see how the share of the total volume of available funds going to residential mortgages could have been increased much, if any, without seriously infringing upon the claims of other areas of long-term investment.

II. THE QUESTION OF DISTRIBUTION

While it is difficult, if not impossible, to show that, taking the postwar period as a whole, residential mortgage financing has been a badly favored sector of the long-term investment market, there is evidence that the flow of home-mortgage funds has been seriously interrupted from time to time and that some parts of the country and some types of communities have had more difficulty than others in obtaining ready access to mortgage funds.

In an economy as dynamic as ours, an economy offering as wide a variety of investment outlets as ours, and one in which the competing demands for funds may sometimes shift with considerable rapidity and for reasons often difficult to explain, it is to be expected that the year-to-year flow of funds to any particular area of investment will exhibit some variability.

Considering, moreover, the differences in the rates of growth of the several regions of the country, the frequent lack of correspondence between the areas of capital accumulation and those of capital demand, and the varying costs of doing business even within short distances from the seat of operations, it is not surprising to find that some communities have more ready and ample access to funds than do others.

Although, in an imperfect world, the existence of the kinds of variations described above is not surprising, and although to some extent they may be unavoidable, it is not to be contended that they are intrinsically desirable. Consequently, there should be wide agreement

that the elimination of avoidable variations in the flow of investment funds is a valid objective of public policy. Over the past quarter century, the Federal Government has directed much effort to this end. It is quite clear, however, that, while Government has obviously had a considerable degree of success in its effort to direct to residential financing an increasingly large share of the total fund of savings, it has, with some notable exceptions, been less successful in equalizing the distribution of funds from year to year, from region to region, and from community to community.

The exceptions may be noted first. Outstanding among them is the effect of mortgage insurance. The achievement of a broader geographic and social distribution of the funds potentially available for residential mortgage financing was outstanding among the purposes of the originators of the FHA mortgage-insurance system. They sought to accomplish this by providing a recognizable standard measure of mortgage security, by increasing permissive loan-to-value ratios and maturities, and by creating a self-supporting means of pooling the major part of the risks of the transaction, whether the risks were inherent in the very nature of the business or were related to the hazards produced by State foreclosure legislation and the liberality of the mortgage terms.

To a remarkable extent, the effort was successful. In the course of time, the FHA insured mortgage was generally accepted as a standard piece of paper that could be confidently and freely traded in with minor regard to State lines and State statutes. Institutions that had not previously been active in home finances became so, and a nationwide mortgage market came into being. For the first time funds from the areas of capital concentration became widely available for home mortgages in areas with insufficient local funds. In the process, regional differentials in interest rates were substantially diminished.

These trends were greatly accelerted following the introduction in 1944 of the home-loan guaranty plan of the Veterans' Administration, which further liberalized mortgage terms for the large class of home borrowers with which it dealt and decreased the risk to which the lender was exposed. As already noted, a spectacular increase in the volume of home-mortgage investment ensued, and this volume was generously spread throughout the Nation. The ratio to the total of FHA and VA mortgages made in each State when compared with the growth of population per State as a percent of total population growth since 1945, as a crude measure of geographic distribution (see table 113), shows that the rapidly growing and usually under-capitaled areas have been the special beneficiaries of these programs. A further indication of the broad geographical distribution that has been obtained is the popularity of these mortgages with life insurance companies, which are the principal investors in the national market and which have given overwhelming preference to insured and guarantied home mortgages over conventional written home mortgages. (See table 114.) To a degree, the same is true of mutual savings banks, some of which have become important participants in the national market for FHA and VA mortgages.

A greater problem than broad geographic coverage has been the distribution of funds to nonmetropolitan communities. Quite generally the smaller towns of the country have limited local sources of mort-

gage funds and their ability to obtain mortgage money from the outside is adversely affected by the cost and trouble, both to the governmental agencies and to the private institutions, of handling business in these communities. On the part of the Government directly, a solution has been attempted by authorizing the Veterans' Administration itself to make loans in remote areas. A notable effort to channel private mortgage funds into remote localities has been that conducted during recent years by private lending institutions, with Government auspices, under the name of the voluntary home mortgage credit program. For reasons that will be discussed later, neither program has provided a satisfactory answer to the problem.[1]

The most serious problem in the distribution of funds for FHA and VA mortgages, however, are not those just discussed. A much graver and more far-reaching difficulty exists in the distribution of mortgage funds from time to time than it does from place to place. Year-to-year variations in the availability of FHA and VA money, and hence in the resulting volume of activity, are characterized by violence and wide amplitude. Taking the two operations together (and not taking into account the buildup period prior to 1948), the number of private houses started under the FHA and VA programs has varied in a single year as much as 46 percent on the upside and more than 40 percent on the downside. In the VA program alone, where the variations were the greater, an annual increase of as much as 96 percent and a decrease of 53 percent have been experienced. (See table 115.) If the number of completed loan transactions is considered, the violence of the fluctuations is almost as great. Annual changes in the number of mortgages guaranteed by VA have ranged from an increase of about 80 percent to a decrease of nearly 40 percent and, of mortgages insured by FHA, from an increase of 43 percent to a decrease of nearly 26 percent. (See table 116.) Still another measure of the fluctuation is that of the annual dollar volume of FHA and VA mortgages acquired by life insurance companies. Again taking the two activities together, the range in volume has been from a year's increase of nearly 64 percent to a year's decline of 45 percent. If the VA volume is taken separately, the fluctuation is spectacularly greater—from 616 percent up to nearly 67 percent down. (See table 117.)

The range of these fluctuations makes that part of housebuilding that depends on FHA and VA financing one of the most volatile elements in the entire economy. In fact practically the whole of the variability in housebuilding activity is associated with the ebb and flow and ebb of funds for FHA and VA mortgages. It will be noted that this volatility is not characteristic of conventional financing, which throughout the period since 1950 (which includes the troubled time of the Korean war) has provided the solid base for housebuilding year in and year out with a stability in striking contrast to the undependability of the Government-sponsored home-credit programs. The most extreme variations in conventionally financed starts since 1948 have been 28.4 percent up in 1950 (the year of the pre-Korean rush) and 8.3 percent down in 1951 (the year of regulation X). (See table 115.) Otherwise the range of year-to-year change has been less than 10 percent on the upside and 7 percent on the downside.

[1] Comment on the certified agency program, instituted by FHA in October 1957 for the purpose of facilitating FHA activity in nonmetropolitan areas, will be found in the latter part of this paper.

III. THE SOURCES OF INSTABILITY

In view of the mandate of the Employment Act of 1946 "to avoid economic fluctuations or to diminish the effects thereof," it is anomalous that one of the principal sources of instability should appear in an area that, aside from the possible exception of agriculture, is more subject to Government influence than any in the economy. If there is any aspect of the Government's housing policy that is in need of examination, it would seem to be this one.

The fluctuations that are characteristic of FHA and VA activity can be explained in no other way than on the basis of influences arising from certain features of the systems themselves. To be sure, the characteristics of housing demand have changed in important aspects from time to time during the postwar period, but these changes have not occurred with sufficient sweep or rapidity to account for the variations in the volume of building that we have noted.

For example, the upsurge in activity prior to 1951 was more clearly related to the easy credit available in that period than it was to the still present, though rapidly diminishing, accumulation of demand resulting from World War II. The subsequent abrupt change was obviously due to the shutoff of the authority of the Federal National Mortgage Association to make advance commitments at par and to the imposition of restrictions on loan-to-value ratios and maturities of FHA and VA loans [2] and the other controls attendant on the Korean war. The fundamental sources and characteristics of demand could not have changed with the abruptness with which the number of new housing starts dropped 21 percent from 1950 through 1952.

The revived expansion of housebuilding from the middle of 1953 to the latter part of 1954, amounting to a 40-percent increase in the seasonally adjusted annual rate of private housing starts, again cannot be attributed to changes in the basic sources of demand. Total personal income rose only slightly during the period. Per capita disposable income remained stable until the last quarter of 1954. Fewer new nonfarm households were being formed than during the preceding 2 years. The enlarging size of the family, no doubt, had some expansive influence at this time. Nevertheless, credit remains as the one source to which the expansion must be mainly attributed; and, as is well known, funds of FHA-insured and, to an even greater extent, for VA-guaranteed mortgages became most generously available during this period.

From 1955, the secondary postwar peak in housing activity, through 1957, housebuilding was struck with another decline. Yet again the trend in building did not reflect any basic changes in underlying demand. Personal income rose steadily to mid-1957 and per capita disposable income did the same. The increase in the number of new nonfarm households appears to have been fairly stable, while the advancement of the highway and urban-renewal programs began to increase the number of demolitions. At the same time, the period was characterized by an increasing stringency in the supply of funds for insured and guaranteed mortgages lasting nearly to the end of 1957. The correlation between changes in the credit supply and

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[2] The concurrent imposition of an 80 percent loan-to-value ratio on conventional home mortgages (regulation X) had comparatively little noticeable effect on number of new houses affected by this type of finance. (See table 115.)

changes in new housing activity is certainly close enough to warrant the assumption of a cause-and-effect relationship. The changes in activity during 1957 again have been abrupt—abrupt as the change in the credit situation and much too abrupt to be explained on the basis of any influence other than that of variations in the credit supply.

IV. THE CAUSES OF CHANGE IN THE SUPPLY OF FHA AND VA FUNDS

The facts reveal a serious year-to-year fluctuation in the volume of funds invested in insured and guaranteed mortgages. They show that this situation results from sweeping variations in the supply of credit rather than from correspondingly violent changes in the basic characteristics of housing demand. They further show that, while fluctuations both in the supply of funds and in the volume of homebuilding in the area of activity affected by the Government-sponsored operations have been frequent and drastic, similar effects have not been felt in the area of conventional financing, which, on the contrary, has been characterized by relatively constant activity.

Because the great unevenness in the volume of housebuilding since 1950 has been largely centered in that part of it affected by insured and guaranteed mortgage financing, and since similar effects have not been felt in the conventional loan area, it is, as has previously been inferred, reasonable to conclude that the violence of the fluctuations is due to qualities peculiar to the insured and guaranteed systems. These particular qualities are the following:

1. The determination of interest rates by statutory or administrative action rather than by the forces of the market.
2. Frequent changes in mortgage terms.
3. Infusions of Government funds in varying amounts and at irregular intervals for making or purchasing FHA and VA mortgages.
4. Arbitrary limitations on the amount of mortgage insurance authorized, requiring frequent extensions.
5. Inflexible restrictions on the amount of FHA earnings that may be used for administrative purposes.
6. The timing of actions relating to interest rates, mortgage terms, support operations, and insurance and expenditure authorizations according to the fortuities of the legislative year or to assumptions as to political impact rather than according to the conditions in, or requirements of, the market.

It may be emphasized at this point that none of the circumstances noted above are present in conventional home financing. With it, mortgage interest rates are free to adapt themselves to current market conditions. The statutes governing conventional mortgage investment are rarely, and almost never drastically, changed and from year to year constitute a dependable basis for operating procedure. Aside from the limited impact of Federal home loan bank advances, nothing even remotely resembling the influence of the FNMA and the VA direct lending operations exists in the conventional area. Political influences and implications are almost entirely absent; and the volume of activity is determined on the one hand by the availability of savings and on the other by the strength of the demand for homebuilding and home purchase.

(*a*) *The interest rate question*

Crucial to the whole problem of the stability and continuity of housing activity is the policy on interest rates for insured and guaranteed mortgages. There is a close inverse correlation between the movements in the general structure of long-term interest rates, as indicated by the yields on corporate and Government bonds, and a seasonally adjusted rate of the number of new houses started under the FHA and VA programs. (See table 118.)

What happens is this: When the general structure of rates rises, yields on all types of investments tend to respond, except those for insured or guaranteed mortgages where interest rates are fixed and where discounts presumably are not to be passed on to the borrower. In any case, discounts have proven to be a poor means of bringing about an adjustment to rising interest rates, as pointed out in the article "Mortgage Credit and Construction" in the August 1958 issue of the Federal Reserve Bulletin. As soon as discounts exceed 3 to 4 points, builders see their profits seriously eroded unless some means can be found to raise prices, and lenders, who find the discount method distasteful and open to suspicion, begin to withdraw from the market and to concentrate their investments in areas that, perhaps yielding no better (possible discounts taken into consideration), are less vulnerable politically.

The consequence is a situation that leads to the widespread view that home mortgage lending bears the brunt of stringent money conditions. The fact is that the rigid FHA and VA interest structure simply makes it impossible for mortgage borowers to compete with other types of borrowers when interest rates generally are above the level set for FHA and VA rates.

When interest rates fall the reverse occurs. As soon as the general structure of rates reaches the point where the rigidly set rates on FHA and VA mortgages again become attractive, there is a rush of funds into this area. The result is the phenomenon we have so frequently witnesed during the postwar period—a drought followed by a flood, and an instability and discontinuinty of activity that makes sound planning impossible alike for homebuyers, builders, and mortgage lender.

The area of FHA and VA financing is the one important part of the investment market that confronts this situation. Elsewhere freedom of negotiation between borrower and lender prevails; and experience has demonstrated that, in respect to the free area of the home mortgage market, a high degree of continuity at a high level can be maintained in all phases of the financial cycle.

(*b*) *The question of supporting the market*

The Government's answer to the effects of a fixed interest rate is to attempt to support a par or near-par price on insured and guaranteed mortgages by means of the direct or indirect use of Treasury financing. This has been done since 1950 through a program of direct Government loans to veterans in remote areas. On a more massive scale it has been done through authorizations erratically given to the Federal National Mortgage Association.

After mid-1948, FNMA embarked upon a program of mortgage buying and of making advance commitments to buy FHA and VA mortgages which resulted in an increase in its holdings from $51

million to over $1,055 million within the next 2 fiscal years. The operation developed into one of such recklessness as to bring about a reverse legislative action in 1950 which abruptly terminated the authority to make advance commitments.

Again in 1958, FNMA was authorized, up to the limit of $1 billion, to buy and make advance commitments to buy FHA and VA mortgages as par—an operation which was terminated by exhaustion of funds within a 5 months' period. Continuously since 1954, FNMA has been in a position to buy FHA and VA loans at par for certain special purposes, where either the set interest rate or the character of the operation raised questions in the minds of private lenders.

These operations are to be distinguished from the secondary market function of FNMA. If conducted strictly along the lines envisaged in the report of the President's Advisory Committee on Housing Programs and Policies of 1953 and in the legislation of the following year, this activity could serve to give the FHA and VA market a desirable degree of liquidity and to help smooth out minor fluctuations of a seasonal or other temporary character. But even this operation is capable of adding to excesses as is evident from its promotional activity following the 1954 act which resulted between mid-1954 and mid-1955 in the net addition to an already swollen stream of FHA and VA financing of $409 million of loans.

The attempts to stabilize activity and at the same time to avoid meeting the interest rate question can hardly be called successful. When money is offered at less than its market price, as has been done in these operations, there is no limit to the demand that will be created, although, even in the minds of the most generous advocates of government help, there must be some limit set on the supply. The consequence is a rush for the funds while they last, followed by a sudden disruption when the funds have run out. That is what has happened this year and that is what is bound always to happen under similar circumstances unless the agency invokes some form of rationing other than price. In face of the kind of pressures to which an agency of this sort is subject, it is doubtful that any nonprice form of rationing would prove practicable. The effort to attain continuity by the route of price support thus ends in exaggerating the very conditions it is designed to cure.

(*c*) *The question of modifying credit terms*

Private industry functions best in its service to society when the rules under which it operates are simple, well known, and changed only infrequently in matters of substance. With the FHA system, hardly a year has passed since 1937 without some change in the terms governing insured mortgages. A builder planning a project today cannot predict the rules to which he will be subject when his operation gets under way in the spring, though they may affect the character of his operation in numerous ways even to his very ability to proceed. Under the Government-sponsored programs, builders and financers work in a state of uncertainty relieved only in the few months of the year in which Congress is not working on housing legislation. This is not a condition conducive to either stable or economic operation.

More than this, time after time, the number of ways in which insured mortgages might be made has been incerased. From a simple, readily understood system involving one method for insuring mort-

gages on 1- to 4-family structures and one method for insuring mortgages on multifamily properties, the variations and additions have so proliferated that the number of formulas and combinations of formulas are virtually countless, and the system itself with its manifold benefits and pitfalls has become as esoteric as the mysteries of Eleusis.

The FHA statute is no longer a comprehensible guide to a business operation but a body of arcana baffling even to the administrative priesthood. The enactment of the VA guaranteed mortgage system alongside the FHA insured mortgage system magnified the complexities under which housebuilding must be conducted; and, when to the involutions of the statutes are added the intricacies of administrative rules, regulations, and interpretations, it is a tribute to the persistence and fortitude of the builder that business can be carried on at all. Again, the effect is not conducive to economy on the part of either industry or Government and it is no wonder that, when demand is active and funds are plentiful, activity is frequently bogged down by the weight of the detail with which it must cope.

(*d*) *The question of appropriations and authorizations*

If General Motors had to come annually to the Congress to get approval of the amount of its own earnings that might be used in the conduct of its next year's business or if the Metropolitan Life Insurance Co. had to come annually to be told how much life insurance it might write during the next year, the chaos and frustration that would be introduced into the automobile and life insurance industries are obvious. Yet this is what FHA must do each year, with results just as deleterious as can be imagined in the hypothetical instances cited.

The insurance of mortgages by FHA is a business operation. No Federal funds are in any way involved in its underwriting functions. Its administrative expenses are borne by its income from charges and premiums paid by borrowers and its reserves are built up in the same way. The only point at which a Federal liability is involved is in the now astronomically remote contingency (so far as its normal homeownership and rental housing operations are concerned) that the Treasury might be called upon to validate the debentures issued on the transfer to FHA of foreclosed property. Indeed, were it not for the fixations of State supervisory agencies, the Treasury guaranty could be removed from all but the types of insurance that are experimental and of dubious soundness without in any way affecting the real security of the insurance.

As a business operation, moreover, FHA must be prepared to cope with the vicissitudes of the market as they arise. Precise prediction of either the demand for its insurance or the resulting cost of its operation cannot be firmly determined far in advance of the affected time period. The consequence of the efforts of FHA to predict, the Bureau of the Budget to confirm or modify the prediction, and, finally, of congressional committees to determine the prospects of a business with which amid their manifold concerns they cannot be intimately familiar, is periodic breakdowns in the operation. Within the single year 1957, three occasions of this sort occurred—once on the matter of the authorization to use its own earnings for needed additional administrative help and twice on the matter of insurance au-

thorization. On each of these occasions building projects were delayed, builders' costs adversely affected, investment programs upset, not to mention the inconvenience or even hardship imposed on prospective homebuyers.

(e) The question of timing

While it is difficult to weigh the comparative gravity of the many disabilities that have been imposed on the mortgage insurance operation, it is my view that, next to the interest rate problem, the difficulties inevitably present in the timing of Government actions in relation to their effects are the most serious contributors to the instability of activity in the Government-sponsored area.

These difficulties pervade all the others, affecting as they do the changing in interest rates, the modifications of mortgage terms, the infusion of Treasury capital, and the approval of expenditures and authorizations. It is safe to say that only by accident has the timing been such as to conform to the requirements of the market, and, in many instances, it may be fairly stated that market considerations were not the primary determinants in the timing of action.

At best, and ordinarily quite properly so where matters of substance are involved, the legislative process is a protracted one. As a result, in legislation dealing with economic conditions, the possibility of effective timing is exceedingly small. One of many examples may be cited in the 1958 legislation. Changes in the financial markets during the latter part of 1957 produced a supply of funds for FHA and VA financing sufficient to produce an upturn in housing activity (seasonally adjusted) in March (although this was not statistically revealed until 3 months later). In spite of the unusual speed with which the 1958 emergency legislation was handled, its provision of $1 billion for the special assistance use of FNMA became available only after it was not actually needed to correct a downtrend and just in time to complicate the mounting problem of Treasury financing and to add its weight to the subsequent rise in the cost of Treasury operations.

Perennial examples of unhappy timing are found in the handling of authorizations for FHA expenditures and insurance as well as in the modifications in mortgage terms. Inevitably these matters come up at the beginning of the building season. If there is delay in a crucial situation affecting FHA's ability to perform, building volume may be adversely affected at the most critical time of the year; or, if a measure promising a liberalization of terms is under consideration, builders are sure to hold back operations in order to gain the maximum benefit of the new provision. The first instance of this sort of thing occurred at the time of the amendments of 1937. It has been repeated many times since. All these circumstances are productive of instability.

The problem, however, goes beyond this aspect, which is more or less inherent in the legislative process. On some occasions, actions have been so timed as to aggravate a current difficulty, as witness the liberalizations of FHA terms in 1957, which, because of the conditions in the financial market at the time, only increased the demand without affecting the supply of funds and consequently added to the then current strain on the interest rate structure. Such errors in judg-

ment may be unavoidable, but the deep immersion of housing credit in the political complex creates other difficulties which, if not avoidable, are nevertheless unfortunate.

The practice of embodying FHA provisions, which have wide appeal and which may be essential to the maintenance of a desirable level of private activity, in an omnibus bill along with provisions that would be uncertain of enactment without FHA as a hostage has on occasion kept the market in unnecessary and disturbing suspense. Equally disturbing is the apparent tendency of the administrative agencies to time important actions with less regard to pressing conditions in the market than to the minimization of what they assume will be an unpleasant political impact. The deferment of the increase in the FHA interest rate until after the election of 1956 is a case in point.

V. MEETING THE ISSUES

The same influences that have caused the maldistribution from year to year in the flow of investment into insured and guaranteed mortgages are reflected in the other situations in which the distribution of funds are a problem. For example, the rigidity of interest rates adversely affects the broad regional distribution of funds, especially at times when credit is stringent. The same is true of the distribution of funds to small, nonmetropolitan communities where the costs of doing mortgage business are necessarily higher than in the centers of concentrated activity. The complexities of the statute and the massive administrative machinery it imposes also increase the cost and difficulty of making FHA insured mortgages in small communities.

Faced with the kinds of conditions that have been described, the tendency is to add to the overloaded legal structure rather than to remove some of its burden. The creation of a new instrumentality, hopefully designed to compensate for the rigidities and complexities of the old, seems to have greater appeal than the essentially easier and more productive approach of simplifying and rationalizing the instrumentalities that we already have.

Thus, at the present time, we have demands for more direct lending, more special assistance funds for FNMA, and the creation of a central mortgage bank. So long as interest rates are set at submarket levels, direct lending and par purchasing can never meet the situation though all the resources of the Treasury were put at their disposal. These devices are certain to contribute to instability rather than the reverse, and their broader effect is always inflationary. What a central mortgage bank might usefully accomplish beyond what can be done through the operation of the FMA secondary market function as contemplated in the 1954 legislation is difficult to see. If it is to support a submarket rate of interest, it confronts the same impossible task that has already been unsuccessfully attempted by other means. If it is to serve as a perennial source for the expansion of home mortgage credit, then any attempt at maintaining economic stability through the exercise of fiscal and monetary policy must be abandoned. In any event, the questions of whether or not new instrumentalities are needed or might be useful if established can never be wisely determined until we discover what may be done by removing the impediments in our existing machinery.

Vital to improving the home credit structure that the Government has devised is an understanding of its inherent nature and of the purposes for which it was originally designed. The insurance of mortgages is essentially a business operation. It affects the fortunes of thousands of builders and the decisions of thousands of financial institutions. It serves hundreds of thousands of homeowners. It is inextricably involved with all the forces of the market place. As a business operation it must be conducted in harmony with those forces rather than in defiance of them unless it is to involve itself in the extreme variability and undependability that characterizes it today. The following recommendations are offered in behalf of this objective:

(*a*) *A market rate of interest*

Since the primary source of the violent irregularity in home-building activity results from the effort to control the mortgage interest rate, the main step in promoting continuity and dependability in the supply of mortgage funds is the freeing of the interest rate so that it may be fully responsible to the forces of the market.

Some contend that, because of its involvement in the mortgage insurance program, the Government has the right to determine the rate and that lenders ougth to recognize that in return for the reduction of their risks they ought to accept such a dictated rate. It has been shown that the Government's liability stemming from the insurance is exceedingly remote and from a practical point of view nonexistent. The right to determine an interest rate on this basis is thus tenuous at best, and in practice has failed in its object.

It should be recalled that the initial purpose of mortgage insurance was to broaden the housing market by making possible lower downpayments and longer maturities than were possible under State law. The insurance was offered to overcome the reluctance of State supervisory authorities to liberalize their own restrictions, and the inertia and—at the time justifiable—apprehensions of institutional lenders at the proposed innovation. It was not assumed by the originators of the legislation that more would be accomplished by this or that a "right" existed to ask for more. On the contrary, throughout the whole prewar period the maximum permissive FHA rate remained consistently above the market rate of interest.

It is sometimes contended that a free interest rate would result in a competitive disadvantage to home borrowers—that, as it has been said, the homeowner could not bid successfully against General Motors in an open market. Aside from the fact that the fixed interest rate has proven a serious disadvantage to home borrowers—because of the deprivation of funds that it imposes on him—the facts of the conventional home loan market, which has never been seriously restricted in periods of so-called "tight money," demonstrate that the home borrower can compete successfully with supposedly more advantaged borrowers.

It is also contended that the elimination of control would result in the extortion of home buyers. This argument, first of all, ignores the existence of State laws against usury. Second, it ignores the powerful competitive forces that exist in the market which tend to keep movements in mortgage interest rates within a fairly moderate range. Amid the sharp changes in credit conditions during recent years, there

has been little heard of extortionate charges in the conventional loan market. Actually the movements of the conventional loan rate appear to have been aggravated by the attempt to control FHA and VA interest rates, since the withdrawal of funds for FHA and VA financing has periodically increased the pressures on the relatively inelastic supply of funds for conventional mortgages.

Judging by the continuity of activity in the free area of the market, a market rate of interest could be counted on to reduce the violence of the swings in FHA and VA activity. It would immeasurably assist in promoting home mortgage lending in nonmetropolitan communities where costs of doing business are unavoidably high. It would encourage a better regional flow of funds and would end the penalization of remote areas at times when money conditions were stiffening.

It is sometimes argued that, interest being a cost, a rise in interest rates is inflationary. This argument ignores the true function of the interest rate as an economic regulator. One has only to look at the course of prices before and after the Treasury-Federal Reserve accord of March 1951, under which interest rates generally were freed from the artificial influence of pegged Government bond prices, to recognize the part that a free interest rate can play in restraining inflation.

The period before 1951, it will be recalled, was a period of suppressed interest rates and rapidly rising prices. The period since that date has been one of freely moving interest rates and comparative price stability. If we take the postwar years only, we find that from 1945 through 1951, the Consumer Price Index went up 44.3 percent. From 1951 through 1957, it went up only an additional 8.3 percent. From 1945 through 1951, the Wholesale Price Index rose nearly 67 percent. In 1957 this index was only 2½ percent above where it was in 1951. Residential building costs went up 65½ percent from 1945 through 1951, but only 13½ percent since that time. Of the postwar increase in general construction costs, more than 80 percent occurred before 1951. (See table 119.)

The free movement of interest rates then plainly serves as a counterinflationary force. Further evidence of this may be seen in the fact that in residential construction, where interest rates have been most subject to artificial support and manipulation since 1951, prices have risen further than they have in other areas. In contrast to the effect of interest rates, that of discounts is clearly and inescapably inflationary. The notion that discounts are absorbed by the builder is a mistaken one except during short periods of sudden change in credit conditions. Over any extended period in which FHA and VA mortgages may be placed only at a discount from par, the discount is definitely translated into cost, a situation that undoubtedly explains in considerable part the greater rise in home construction costs than in prices generally. The unfairness of interest rate control to the borrower is again illustrated.

A mortgage written at a high interest rate, moreover, may later be refinanced if interest rates decline. A discount, however, is written into the price at the outset and can never be retrieved. The situation is really worse than this. Since the discount represents an adjustment in yield over the whole period of the investment, the initial borrower, who, on the average will hold the property only 8 to 10 years, must carry a money cost extended over what may be another 20 to 22 years.

The free interest rate may at times seem to be a stern regulator, but in the end it is more equitable than any other that has been devised and it serves the added purpose of encouraging savings, the primary means by which investment may be safely expanded.

(*b*) *Simplifying the system*

The housing statutes badly need simplification and codification. The accretion over the years of both statutory and administrative complexity is mainly the result of the efforts to strain a badly restricted credit mechanism to do things of a special nature which, with more freedom in the determination of the interest rate between borrower and lender and of the mortgage insurance premium by FHA, might better be accomplished within a much simplified legislative framework.

What is required is a reduction of the elaborate FHA edifice to a simple structure providing at most one simplified formula for the insurance of mortgages on 1- to 4-family dwellings, 1 for cooperative housing, and 1 for rental property, and permitting FHA wide latitude of administrative discretion to meet the broadest possible range of housing demand. If this were done, all special forms of FHA mortgage insurance could be eliminated, and the VA home loan guaranty system could be allowed to expire at its present termination dates.

(*c*) *The FHA insurance authorization*

Within my 25 years' acquaintance with the FHA operation there has never, to my memory, been an occasion on which an FHA request for an additional underwriting authorization, in whatever amount considered by FHA as necessary for 1 year's operation, has been refused by Congress. No other criterion than FHA's estimate of its potential business has ever been applied in setting the additional authorizations.

Congress has, however, going back to the late 1930's, refused to allow FHA any relief from an annual plea for an authorization, preferring, as previously described, to hold FHA as a surety for the passage of less popular measures. The frequent delay and discontinuity of housing activity resulting from this practice has been noted. There is no sound reason why the authority of FHA to insure mortgages should be limited in any way, if the program were fully exposed to the influence of movements in the general structure of interest rates. Should at any time abuses or excesses develop, or threaten to develop, from this course, Congress has ample means for investigating and taking such corrective action as might be needed.

(*d*) *Providing for FHA administrative expenses*

Section I of the National Housing Act, as amended, provides that the expenditures made by FHA in necessary conduct of its business "shall not exceed 35 percentum of the income received by the Federal Housing Administration from premiums and fees during the preceding fiscal year."

This is generally recognized as a sensible and practicable provision. It was inserted in the statute in 1949 after years of unhappy experience for the express purpose of avoiding recurrent interruption in the FHA operation and hence in building activity. It has been nullified by the

Appropriations Committees of the Congress, which have insisted on subjecting FHA to the type of appropriation procedure as that which is applicable to public works operations involving the use of Government funds. As a business operation, FHA requires sufficient flexibility in the expansion of its organization, use of overtime, and so forth, to meet the contingencies that arise in a business operation. It cannot serve its purpose in any other way. The expenditure provision in the statute should be made effective.

(*e*) *The place of secondary market support*

The frequent unevenness of the flow of savings into institutional hands and the exigencies of investment policy may produce situations in which an awkward disparity exists between the availability of mortgage funds and the seasonal requirements of the house building industry. There are also occasions when miscalculation of savings flow or other contingencies may produce legitimate needs for liquidation of portions of mortgage investment portfolios. There may be other occasions on which a reasonably calculable increase in the availability of mortgage funds might be anticipated if the institutional facility was present for doing so.

To cover such circumstances as these, the secondary market function of the Federal National Mortgage Association was created by the Housing Act of 1954. With the penalties therein provided to discourage its use as a primary source of funds, FNMA may serve a helpful purpose, although, if FHA were made the flexible and effective instrumentality that would result from the recommendations offered herein, the place of FNMA would undoubtedly be a minor one.

This simple purpose, however, is not what is contemplated by the advocates of an expanded secondary market operation. What is wanted by them is in fact not a secondary market operation at all, but a primary source of funds that will at all times assure housing an "adequate," which may be taken to mean an "inexhaustible," supply of funds, without recognition of other demands or the requirements of an effective monetary policy. The excuse offered for such an operation is that housing credit suffers an unequal impact from restrictive monetary actions. It is doubtful, and it is certainly not proven, that, if housing borrowers were free to compete in the financing market, they would suffer a distinctly unequal impact. On the contrary, the experience in the conventional loan market appears to indicate that they would not. Before dubious and possibly hazardous innovations in the mortgage credit system are undertaken, it would seem wise first to test the results of a less trammelled mortgage insurance system operating with appropriate flexibility in a free market.

VI. THE CERTIFIED AGENCY PROGRAM

The second part of this assignment is addressed specifically to the efficacy of the certified agency program as a means of changing the size or distribution of the available pool of mortgage credit. Briefly the plan is an administrative arrangement under which the Federal Housing Administration permits specially approved institutions to conduct the examination and approval of home mortgages for insurance, using appraisers and inspectors named by FHA. The purpose of the

plan is to simplify the examination procedure and to reduce the time for handling cases, with particular reference to nonmetropolitan communities. Over a testing period of 12 months, the plan has been extended to 21 insuring offices in 19 States. Although generally confined to communities of around 15,000 or less population, the experimental operation also included the cities of all sizes in Colorado and Montana, as well as certain medium sized cities in Pennsylvania and Texas.

In concept, the plan is close to the method of operation which the originators of FHA assumed the agency would follow in the first instance, namely one in which the responsibility for making mortgage loans would be reposed in the mortgage institutions, leaving to FHA the tasks of setting standards, supervision, and review. Events at the time dictated otherwise. The period in which FHA was founded was one of demoralization in the mortgage industry. Confidence was low. Institutional facilities did not exist for operating a national mortgage market such as the National Housing Act contemplated.

Under these circumstances, it was necessary for FHA to undertake the major part of the examination and appraisal function if the system was to be launched at all. This was done in the establishment of the elaborate FHA underwriting procedure. Once the function was assumed, however, the natural laws of bureaucratic growth came into operation. What was intended to be temporary became permanent and what was a major responsibility became virtually the whole responsibility. The system grew in complexity year by year, not only as a result of annual legislative accretions, but also owing to the natural tendency of the bureaucracy to multiply both in numbers and functions. If there ever was an illustration of Parkinson's law, the FHA underwriting process provides it.

The certified agency program is a unique example of a governmental agency attempting to refocus responsibility, simplify procedure, economize an operation, and at the same time broaden its service to the public. The FHA Commissioner is to be applauded for this rare performance.

There is no reason why the plan should not be a practicable one, capable of being extended to encompass the entire FHA operation.[3] Today the FHA is well established. Today's system of mortgage origination and servicing has attained a maturity that was not the case at the time of FHA's founding a quarter of a century ago. Responsibility may today be shifted to private hands with assurance that a competent job can be done, while appropriate supervision and review by FHA combined with the painful sanctions it may impose upon the careless or recalcitrant mortgagee should give assurance that a competent job will be done.

The advantages of the plan are very great. For the first time an economical means is created for handling FHA financing in communities at some distance from FHA offices. As a consequence, with it widely in operation, the voluntary home mortgage credit program could undoubtedly become so thoroughly practical that it might be operated entirely without cost to the Government. FHA's adminis-

[3] It is not suggested that FHA's procedure for examining and approving the layouts of new subdivisions be abandoned or that the certified agency program be permitted to be used to circumvent subdivision requirements. Once a subdivision was approved, however, CAP could appropriately be used in respect to the individual mortgages.

trative cost per case would be much reduced or the amount of the payment going into reserves might be increased. The enormous saving in time and the elimination of uncertainty that would follow the use of CAP would make possible a significant reduction in building cost. The benefits of the FHA mortgage insurance system would thus become more broadly and economically available.

These advantages, however, are to be gained only under conditions that assure to insured mortgages a market rate of interest. Without that, there is no feasible way of adjusting money costs to the variety of circumstances under which the plan may be used. The present control of interest rate therefore stands in the way of the success of the most forward innovation in FHA administrative history. It is also time that the complete success of the plan, especially in small places, depends upon the elimination of the other sources of instability in FHA and VA financing that have been described in this paper, since these inevitably bear the more heavily in activity the further it is from the center of operations.

TABLE 109.—*Mortgage debt in relation to total private debt, 1929–57*

[Billions of dollars]

Year	Total private long-term debt outstanding	Total nonfarm residential outstanding mortgage debt		Total nonfarm mortgage debt on 1- to 4-family outstanding properties		Total outstanding debt other than residential mortgages	
		Dollar volume	As a percent of total private debt	Dollar volume	As a percent of total private debt	Dollar volume	As a percent of total private debt
1929	$88.1	$24.9	28.3	$18.9	21.5	$63.2	71.7
1930	92.5	25.4	27.5	18.9	20.4	67.1	72.5
1931	90.3	24.3	26.9	18.1	20.1	66.0	73.1
1932	86.7	22.7	26.2	16.7	19.3	64.0	73.8
1933	81.9	21.1	25.8	15.4	18.8	60.8	74.2
1934	77.7	20.7	26.6	15.6	20.1	57.0	73.4
1935	75.7	20.2	26.7	15.4	20.3	55.5	73.3
1936	74.1	20.0	27.0	15.4	20.8	54.1	73.0
1937	74.8	19.9	26.6	15.5	20.7	54.9	73.4
1938	76.1	20.2	26.5	15.8	20.8	55.9	73.5
1939	76.0	20.8	27.4	16.3	21.4	55.2	72.6
1940	76.2	21.9	28.7	17.3	22.7	54.3	71.3
1941	77.2	23.2	30.1	18.4	23.8	54.0	69.9
1942	75.5	22.9	30.3	18.2	24.1	52.6	69.7
1943	72.6	22.4	30.9	17.8	24.5	50.2	69.1
1944	70.8	22.4	31.6	17.9	25.3	48.4	68.4
1945	70.1	23.0	32.8	18.5	26.4	47.1	67.2
1946	78.6	28.0	35.6	23.1	29.4	50.6	64.4
1947	89.9	33.6	37.4	28.2	31.4	56.3	62.6
1948	102.9	39.5	38.4	33.3	32.4	63.4	61.6
1949	112.7	44.6	39.6	37.5	33.3	68.1	60.4
1950	125.6	53.8	42.8	45.2	36.0	71.8	57.2
1951	140.6	61.7	43.9	51.7	36.8	78.9	56.1
1952	155.7	69.3	44.5	58.5	37.6	86.4	55.4
1953	169.9	77.4	45.6	66.1	38.9	92.5	54.4
1954	185.9	87.3	47.0	75.7	40.7	98.6	53.0
1955	207.9	100.6	48.4	88.2	42.4	107.3	51.6
1956	228.5	112.1	49.1	99.0	43.3	116.4	50.9
1957	248.2	121.3	48.9	107.6	43.4	126.9	51.1

Source: J. E. Morton, Urban Mortgage Lending, Princeton University Press, 1956, tables 1 and 2, pp. 15 and 18; Survey of Current Business (Department of Commerce), May 1957, tables 1 and 6, pp. 17 and 22, and May 1958, tables 1, 2, and 3, pp. 14 and 15; Federal Reserve Board, unpublished data.

TABLE 110.—*Nonfarm mortgage debt on 1- to 4-family properties by type of financing, 1945–57*

Year	Total nonfarm mortgage debt outstanding on 1- to 4-family properties (in millions)	Dollar volume (in millions)				Percent distribution			
		Government underwritten			Conventionally financed	Government underwritten			Conventionally financed
		Total	FHA-insured	VA-guaranteed		Total	FHA-insured	VA-guaranteed	
1945	$18.6	$4.3	$4.1	$0.2	$14.3	23.1	22.0	1.1	76.9
1946	23.1	6.1	3.7	2.4	16.9	30.4	16.0	10.4	73.2
1947	28.2	9.3	3.8	5.5	18.9	33.0	13.5	19.5	67.0
1948	33.3	12.5	5.3	7.2	20.8	37.5	15.9	21.6	62.5
1949	37.5	15.0	6.9	8.1	22.6	40.0	18.4	21.6	60.3
1950	45.2	18.9	8.6	10.3	26.3	41.8	19.0	22.8	58.2
1951	51.7	22.9	9.7	13.2	28.8	44.3	18.8	25.5	55.7
1952	58.5	25.4	10.8	14.6	33.1	43.5	18.5	25.0	56.5
1953	66.1	28.1	12.0	16.1	38.0	42.6	18.2	24.4	57.5
1954	75.7	32.1	12.8	19.3	43.6	42.4	16.9	25.5	57.6
1955	88.2	38.9	14.3	24.6	49.3	44.1	16.2	27.9	55.9
1956	99.0	43.9	15.5	28.4	55.1	44.4	15.7	28.7	55.6
1957	107.6	47.2	16.5	30.7	60.4	43.8	15.3	28.5	56.1

Source: Saul B. Klaman, The Volume of Mortgage Debt in the Postwar Decade, Technical Paper 13, National Bureau of Economic Research, Inc., 1958, tables 10, 12, and 14, pp. 62, 66, and 70; Federal Reserve Bulletin, September 1958, p. 1103.

TABLE 111.—*E. H. Boeckh & Associates index of residential construction costs*

[1947–49=100]

Year	Annual average	Year	Annual average
1945	70.1	1952	119.1
1946	77.0	1953	121.2
1947	93.2	1954	120.3
1948	104.8	1955	123.9
1949	102.1	1956	129.4
1950	107.7	1957	131.8
1951	116.0	Percent change, 1957 from 1945	88.0

Source: Department of Commerce.

TABLE 112.—*Nonfarm mortgage debt outstanding on 1- to 4-family properties in 1947–49 dollars*

Year	Amount (billions of current dollars)	Amount (billions of 1947–49 dollars)	Year	Amount billions of current dollars)	Amount (billions of 1947–49 dollars)
1945	$18.5	$24.2	1952	$58.5	$51.5
1946	23.1	27.6	1953	66.1	57.8
1947	28.2	29.5	1954	75.7	65.9
1948	33.3	32.4	1955	88.2	77.1
1949	37.5	37.0	1956	99.0	85.2
1950	45.2	43.9	1957	107.6	89.5
1951	51.7	46.6			

Source: Federal Home Loan Bank Board; current dollar figures adjusted on the basis of the consumer price index.

TABLE 113.—*Percent distribution by State of United States total principal amount of home loans closed by VA and mortgages insured by FHA on 1- to 4-family properties, and increase in civilian population, 1947–57*

	VA home loans closed as percent of United States total	FHA-insured mortgages on 1- to 4-family properties as percent of United States total	Increase in civilian population as percent of United States total increase
Alabama	1.2	1.2	1.1
Arizona	.5	1.8	1.2
Arkansas	.4	1.0	.1
California	15.2	16.0	12.3
Colorado	1.3	1.2	1.4
Connecticut	1.6	1.5	1.3
Delaware	.5	.2	.4
District of Columbia	2.3	.1	[1]
Florida	2.5	3.2	4.9
Georgia	1.8	1.8	1.9
Idaho	.2	.6	.4
Illinois	4.1	3.6	5.4
Indiana	1.6	3.0	2.8
Iowa	1.0	1.1	1.2
Kansas	.8	2.0	1.0
Kentucky	.7	1.0	1.1
Louisiana	1.3	1.9	1.7
Maine	.3	.4	.3
Maryland	1.6	1.3	2.1
Massachusetts	4.8	.8	1.7
Michigan	4.0	6.8	5.5
Minnesota	2.0	1.1	1.9
Mississippi	.5	.6	.4
Missouri	2.3	2.9	1.9
Montana	.2	.4	.5
Nebraska	0.4	1.0	0.6
Nevada	0.1	0.5	0.3
New Hampshire	0.4	0.1	0.3
New Jersey	5.4	3.0	3.8
New Mexico	0.5	0.7	0.7
New York	11.0	6.0	9.4
North Carolina	1.0	1.2	2.5
North Dakota	0.1	0.2	0.2
Ohio	5.0	5.2	5.7
Oklahoma	1.5	2.3	0.7
Oregon	0.6	1.6	1.2
Pennsylvania	6.6	4.0	4.7
Rhode Island	0.6	0.3	0.3
South Carolina	0.6	0.8	1.2
South Dakota	0.1	0.4	0.3
Tennessee	1.5	1.9	1.5
Texas	5.8	6.2	6.4
Utah	0.5	1.0	0.7
Vermont	0.2	0.1	0.1
Virginia	1.3	2.4	2.1
Washington	1.9	4.2	1.5
West Virginia	0.3	0.5	0.6
Wisconsin	1.6	0.8	2.2
Wyoming	0.2	0.3	0.2
United States total [2]	100.0	100.0	100.0

[1] Decline of 21,000.
[2] Details may not add to totals due to rounding.

Sources based on:
FHA data.—Dec. 31, 1945, tables 5 and 26, pp. 14–15 and 32–33, 12th Annual Report of the Federal Housing Administration; Dec. 31, 1957, table III–13, p. 68, 11th Annual Report of the Housing and Home Finance Agency.
VA data.—Dec. 31, 1945, Dec. 31, 1957, Report and Statistics Division, Office of the Controller, Department of Veterans Benefits, Veterans' Administration.
Population data.—July 1, 1945, Current Population Report, Population Estimates, Series P–25, No. 72, Bureau of the Census, U. S. Department of Commerce; July 1, 1957, ibid., No. 186.

TABLE 114.—*Holdings of FHA-insured mortgages on 1- to 4-family properties and VA-guaranteed loans as a percent of total nonfarm 1- to 4-family residential mortgage holdings of institutional investors, 1946–57*

[Millions of dollars]

Year	Total nonfarm residential mortgage holdings	FHA insured 1- to 4-family mortgage holdings	FHA holdings as a percent of total	VA guaranteed loan holdings	VA holdings as a percent of total	FHA and VA as a percent of total
SAVINGS AND LOAN ASSOCIATIONS						
1946	$6,840	$415	6.1	$977	14.3	20.4
1947	8,475	409	4.8	2,035	24.0	28.8
1948	9,841	545	5.5	2,397	24.4	29.9
1949	11,117	685	6.2	2,586	23.3	29.5
1950	13,116	812	6.2	2,973	22.7	28.9
1951	14,844	840	5.7	3,133	21.1	26.8
1952	17,645	885	5.0	3,394	19.2	24.2
1953	20,999	1,020	4.9	3,979	18.9	23.8
1954	25,004	1,151	4.6	4,721	18.9	23.5
1955	30,001	1,391	4.6	5,891	19.6	24.2
1956	34,040	1,472	4.3	6,643	19.5	23.8
1957	38,209	1,604	4.2	7,013	18.4	22.6
LIFE INSURANCE COMPANIES						
1946	$2,545	$1,108	43.5	$254	10.0	53.5
1947	3,497	1,281	36.6	843	24.1	60.7
1948	4,943	2,043	41.3	1,104	22.3	63.6
1949	6,093	2,785	45.7	1,224	20.1	65.8
1950	8,478	3,683	43.4	2,026	23.9	67.3
1951	10,610	4,120	38.8	3,131	29.5	68.3
1952	11,757	4,365	37.1	3,347	28.5	65.6
1953	13,195	4,673	35.4	3,560	27.0	62.4
1954	15,153	4,802	31.7	4,643	30.6	62.3
1955	17,661	5,104	28.9	6,074	34.4	63.3
1956	20,130	5,381	26.7	7,304	36.3	63.0
1957	21,500	5,531	25.7	7,721	35.9	61.6
MUTUAL SAVINGS BANKS						
1946	$2,033	$288	14.2	$194	9.5	23.7
1947	2,283	275	12.0	477	20.9	32.9
1948	2,835	467	16.5	755	26.6	43.1
1949	3,364	605	18.0	1,077	32.0	50.0
1950	4,312	1,009	23.4	1,457	33.8	57.2
1951	5,331	1,543	28.9	1,726	32.4	61.3
1952	6,194	1,793	28.9	2,237	36.1	65.0
1953	7,373	2,020	27.4	3,053	41.4	68.8
1954	9,002	2,234	24.8	4,262	47.3	72.1
1955	11,100	2,576	23.2	5,773	52.0	75.2
1956	12,990	2,897	22.3	7,139	55.0	77.3
1957	14,110	3,138	22.2	7,790	55.2	77.4
COMMERCIAL BANKS						
1946	$4,576	$1,361	29.7	$890	19.4	49.1
1947	6,303	1,394	22.1	1,870	29.7	51.8
1948	7,396	1,707	23.1	2,230	30.2	53.3
1949	7,956	2,002	25.2	2,350	29.5	54.7
1950	9,481	2,510	26.5	2,630	27.7	54.2
1951	10,275	2,812	27.4	2,921	28.4	55.8
1952	11,250	3,194	28.4	3,012	26.8	55.2
1953	12,025	3,529	29.3	3,061	25.5	54.8
1954	13,300	3,790	28.5	3,350	25.2	53.7
1955	15,075	4,286	28.4	3,711	24.6	53.0
1956	16,245	4,515	27.8	3,902	24.0	51.8
1957	16,385	4,370	26.7	3,580	21.9	48.6

Source: 1946–56, The Volume of Mortgage Debt in the Postwar Decade, by Saul B. Klaman, National Bureau of Economic Research, Inc., 1958, tables 16–19, pp. 74–89; 1957, estimated according to the method used by Mr. Klaman as described in the footnotes to his tables.

TABLE 115.—*Total private nonfarm housing starts, by type of financing 1946–57*

Year	Total private starts	Year to year, percent change	FHA	Year to year, percent change	VA	Year to year, percent change	Conventional or all cash	Year to year, percent change	FHA and VA	Year to year, percent change
1946	662,473		69,033		[1] 86,100		507,340		155,133	
1947	845,560	27.6	229,035	231.8	[1] 211,400	145.5	405,125	−20.1	440,435	183.9
1948	913,500	8.0	294,059	28.4	[1] 109,600	−48.2	509,841	25.8	403,659	−8.3
1949	988,800	8.2	363,802	23.7	[1] 108,800	−.3	516,198	1.2	472,602	17.1
1950	1,352,200	36.8	486,681	33.8	[1] 202,800	86.4	662,719	28.4	689,481	45.9
1951	1,020,100	−24.6	263,523	−45.9	148,634	−26.7	607,943	−8.3	412,157	−40.2
1952	1,068,500	4.7	279,901	6.2	141,274	−5.0	647,325	6.5	421,175	2.2
1953	1,068,300	[2]	251,969	−10.0	156,616	10.9	659,715	1.9	408,585	−3.0
1954	1,201,700	12.5	276,307	9.7	307,038	96.0	618,355	−6.3	583,345	42.8
1955	1,309,500	9.0	276,695	.1	391,789	27.6	641,016	3.7	668,484	14.6
1956	1,093,900	−16.5	189,341	−31.6	270,675	−30.9	633,884	−1.1	460,016	−31.2
1957	992,800	−9.2	168,423	−11.0	128,302	−52.6	696,075	9.8	296,725	−35.5

[1] Estimate. No exact figures are available for starts under VA inspection prior to September 1950. These estimates are based on figures in Savings and Loan Fact Book, 1957, United States Savings and Loan League.
[2] Less than 0.1 percent.

Sources: Bureau of Labor Statistics, Federal Housing Administration, Veterans' Administration. The figure for conventionally financed or all cash starts is an estimate made by subtracting the exact FHA and VA figures from the rounded Bureau of Labor Statistics figure.

TABLE 116.—*Number and amount of mortgages on 1- to 4-family properties insured by FHA and home loans guaranteed by VA, 1946–57*

Year	Loans on 1- to 4-family properties insured by FHA				Home loans guaranteed by VA			
	Units		Dollar volume		Units		Dollar volume	
	Number	Year to year, percent change	Amount (in millions)	Year to year, percent change	Number	Year to year, percent change	Amount (in millions)	Year to year, percent change
1946	85,751		$422		[1]		$2,302	
1947	150,091	75.0	895	112.0	541,922		3,286	42.7
1948	320,725	113.7	2,116	136.4	349,934	−35.4	1,881	−42.8
1949	319,506	−.4	2,210	4.4	276,793	−20.9	1,424	−24.3
1950	351,528	10.0	2,492	12.8	497,596	79.8	3,073	115.8
1951	261,231	−25.7	1,928	−22.6	447,373	−10.1	3,614	17.6
1952	246,109	−5.8	1,942	.7	306,783	−31.4	2,721	−24.7
1953	272,299	10.6	2,289	17.9	322,160	5.0	3,064	12.6
1954	222,665	−18.2	1,942	−15.2	410,778	27.5	4,257	38.9
1955	318,454	43.0	3,085	58.9	649,591	58.1	7,157	68.1
1956	253,300	−20.5	2,638	−14.5	508,916	−21.7	5,873	−17.9
1957	202,453	−20.1	2,251	−14.7	306,735	−39.7	3,761	−36.0

[1] Not available.

Source: Federal Housing Administration, Veterans' Administration.

TABLE 117.—*Acquisition by life insurance companies of FHA-insured mortgages and VA-guaranteed loans, 1947–57*

[Millions of dollars]

Year	Total FHA and VA		FHA		VA	
	Total amount	Year to year, percent change	Amount	Year to year, percent change	Amount	Year to year, percent change
1947	$1,051		$451		$600	
1948	1,568	49.2	1,202	166.5	366	−39.0
1949	1,481	−5.5	1,350	12.3	131	−64.2
1950	2,424	63.7	1,486	10.1	938	616.0
1951	2,352	−3.0	1,058	−28.8	1,294	38.0
1952	1,203	−45.0	864	−18.3	429	−66.8
1953	1,272	−1.6	817	−5.4	455	6.1
1954	2,050	61.2	672	−17.7	1,378	202.9
1955	2,810	37.1	971	44.5	1,839	33.5
1956	2,494	−11.2	842	−13.3	1,652	−10.2
1957	1,484	−40.5	653	−22.4	831	−49.7

Source: Institute of Life Insurance.

TABLE 118.—*Comparison of Aaa corporate and long-term Government bond yields with seasonally adjusted [1] FHA and VA private starts, 1951–57*

Month	1951			1952		
	Bond yields		FHA and VA starts	Bond yields		FHA and VA starts
	Moody's Aaa	Long-term Governments		Moody's Aaa	Long-term Governments	
	Percent	*Percent*		*Percent*	*Percent*	
January	2.66	2.39	[2]	2.98	2.74	31,756
February	2.66	2.40	[2]	2.93	2.71	32,258
March	2.78	2.47	41,562	2.96	2.70	32,873
April	2.87	2.56	39,310	2.93	2.64	33,804
May	2.89	2.63	37,550	2.93	2.57	34,438
June	2.94	2.65	36,066	2.94	2.61	34,847
July	2.94	2.63	34,510	2.95	2.61	35,248
August	2.88	2.57	33,598	2.94	2.70	35,467
September	2.84	2.56	32,787	2.95	2.71	35,701
October	2.89	2.61	32,090	3.01	2.74	35,786
November	2.96	2.66	31,647	2.98	2.71	35,563
December	3.01	2.70	31,326	2.97	2.75	35,391
	1953			1954		
January	3.02	2.80	35,209	3.06	2.69	38,285
February	3.07	2.83	35,215	2.95	2.62	39,656
March	3.12	2.89	35,150	2.86	2.53	41,439
April	3.23	2.97	34,618	2.85	2.48	43,334
May	3.34	3.12	34,246	2.88	2.54	45,460
June	3.40	3.13	34,116	2.90	2.55	47,645
July	3.28	3.04	33,959	2.89	2.47	49,503
August	3.24	3.05	33,984	2.87	2.48	51,009
September	3.29	3.01	34,262	2.89	2.52	52,341
October	3.16	2.87	34,728	2.87	2.54	53,751
November	3.11	2.86	35,663	2.89	2.57	55,147
December	3.13	2.79	37,003	2.90	2.59	56,518
	1955			1956		
January	2.93	2.68	57,649	3.11	2.88	46,387
February	2.99	2.77	58,418	3.08	2.85	44,507
March	3.02	2.78	58,649	3.10	2.93	42,709
April	3.01	2.82	58,374	3.24	3.07	41,332
May	3.04	2.81	57,476	3.28	2.97	40,097
June	3.05	2.82	56,242	3.27	2.93	38,889
July	3.06	2.91	55,287	3.28	3.00	37,655
August	3.11	2.95	54,250	3.43	3.17	36,508
September	3.13	2.92	52,960	3.56	3.21	35,425
October	3.10	2.87	51,699	3.59	3.20	33,952
November	3.10	2.89	50,295	3.69	3.30	32,290
December	3.15	2.91	48,361	3.75	3.40	30,709
				1957		
January				3.77	3.34	30,809
February				3.67	3.22	29,498
March				3.66	3.26	27,283
April				3.67	3.32	26,367
May				3.74	3.40	25,555
June				3.91	3.58	24,966
July				3.99	3.60	24,632
August				4.10	3.63	24,323
September				4.12	3.66	23,979
October				4.10	3.73	23,928
November				4.08	3.57	24,174
December				3.81	3.30	25,196

[1] 12-month centered moving average.
[2] Monthly figures for VA starts are not available before September 1950.

Sources: Federal Reserve Board, Federal Housing Administration, Veterans' Administration.

FIGURE 27

Moody's AAA Bond Yields & Private FHA & VA Starts

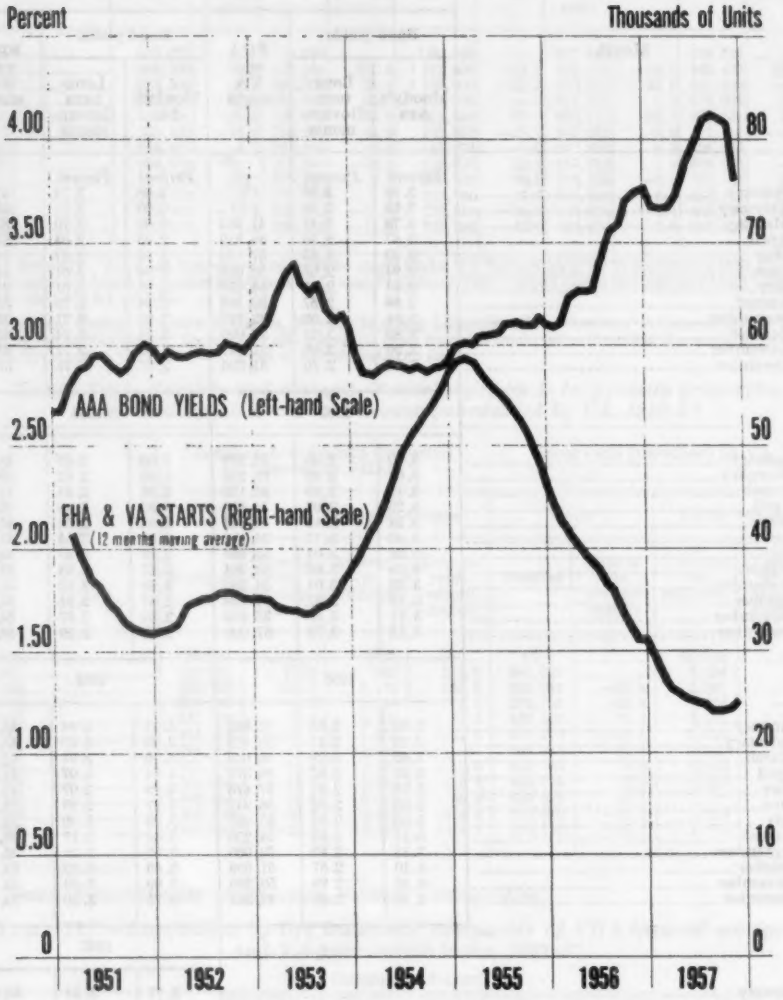

TABLE 119.—*Changes in selected economic indicators, 1945–57*

	Indicators (annual averages)			Percent change		
	1945	1951	1957	1957 from 1945	1951 from 1945	1957 from 1951
Yields on FHA mortgages (percent) [1]	4.25	4.34	5.61	32.0	2.1	29.3
Yields on Moody's Aaa corporate bonds (percent)	2.62	2.86	3.89	48.5	9.2	36.0
Commerce Composite Construction Cost Index [2]	67	116	137	104.5	73.1	18.1
Boeckh Residential Construction Cost Index [2]	70.1	116.0	131.8	88.0	65.5	13.6
Wholesale Price Index [2]	68.8	114.8	117.6	70.9	66.9	2.4
Consumer Price Index	76.9	111.0	120.2	56.3	44.3	8.3

[1] Average yield for sec. 203 loans based on prices paid in the secondary market assuming 20-year maturity with prepayment after 8 years.
[2] 1947–49=100.

Sources: Federal Housing Administration, Federal Reserve Board, U. S. Departments of Commerce, and Labor.

SUGGESTED MODIFICATIONS OF THE FHA, VA, AND FNMA PROGRAMS TO IMPROVE THE SUPPLY AND DISTRIBUTION OF MORTGAGE CREDIT AVAILABLE FOR HOME FINANCING

ROBERT E. SCOTT, Realtor, Elizabeth, N. J.

This paper was prepared in response to the following questions:

> In what ways could the programs administered by the Federal Housing Administration, the Veterans' Administration, and the Federal National Mortgage Association be supplemented or modified to increase and to improve the distribution of the pool of credit available for new residential construction? What can be expected from FHA's certified agency program as a factor to change the size and distribution of this pool of credit?

Before setting myself to the task of preparing this monograph I elicited from the staff director some sympathy to enlarging the scope of the question and my response, so as to consider the availability of credit for home financing generally rather than limiting it to new construction. I was motivated in this by my increasing concern over the orientation of the Federal housing agencies, as well as the congressional housing subcommittees, to new construction, thereby relegating the availability of credit for purchasing existing housing to some secondary role.

I appreciate that sometimes the Congress, in order to reverse a downward business trend, might be justified in stimulating new construction as a contracyclical device. However, this monograph is directed at the needs of the American people during the decade beginning in 1961 and therefore should be directed at the larger goal of home financing, whether it be for new or existing construction.

It is estimated that 70 percent of the residential real estate transactions are on existing houses as the American family constantly seeks to upgrade its housing standards. Approximately 50 percent of those purchasing new homes have an existing home which must be sold so that the equity could be applied to the new home. The volume of new construction sold must therefore bear a direct relationship to the availability of credit for financing the sale of existing homes.

There is no longer any question that the Federal Government can and must play a vital role in the field of mortgage finance if private enterprise is to attain its maximum potential in meeting the housing needs and aspirations of all of our people.

Not only the housing industry, but our entire economy have benefited immeasurably from the cooperation of FHA, VA, and FNMA in extending the advantages of home ownership to the maximum number of American families, in upgrading standards of housing, creating

and maintaining high employment, and leveling to an appreciable degree the peaks and valleys in the real estate market.

However, there are many ways in which these programs can be improved in order to more fully accomplish their avowed purposes.

I believe that the changes herein recommended would sharpen the home financing tools wielded by these agencies and thereby attract increased participation of private investment capital.

FEDERAL HOUSING ADMINISTRATION

FHA came into being in 1934, during the depths of the depression. At that time, the maximum mortgage FHA would insure on a single-family house was $16,000, later raised to $20,000 on 1- and 2-family dwellings, the present statutory maximum. This figure is completely unrealistic in the light of present-day circumstances, and is depriving many families of the opportunity of improving their living conditions. The restriction has forced many mortgagors to accept higher down payments, shorter term conventional financing, frequently necessitating high cost second and even third mortgages. This secondary and tertiary financing is not only more expensive, but carries with it the burden of oppressive monthly carrying charges which have often resulted in foreclosure and financial loss to the homeowners. Inasmuch as the FHA will not underwrite a loan unless the applicant conclusively proves he is capable of meeting the resulting carrying charges, there is no reason why the maximum insurable amount on 1- and 2-family houses should not be increased to $30,000, the present $27,500 maximum on 3 families, to $30,000, and the $35,000 limitation on 4 families to $40,000.

It was the original FHA concept that the one-half of 1 percent per annum mortgage insurance premium would be invested, and the proportionate share returned to the mortgagor—less proper allowances for losses, administrative expenses, and reserves—when the loan was fully paid.

While this system has permitted FHA to operate self-sufficiently for more than 24 years without expense to the taxpayers, accumulating reserves of over $600 million in the process, there are many defects in this modus operandi. In the first place, few buyers expect the refund of this mortgage insurance premium. Secondly, the entire refund is made to the mortgagor at the time the loan is paid off; this mortgagor may have contributed very little toward the mortgage insurance pool, and is therefore undeserving of the windfall. Thirdly, the one-half of 1 percent per annum premium substantially increases the monthly carrying charge, imposing an added burden on the homeowner. Finally, the operation involves annoying penny bookkeeping for the lender. The mutuality of this acount should be eliminated, and a single payment insurance premium, payable in advance at closing of the mortgage, substituted. It is estimated that a single advance payment of 2 percent of the amount of the loan, plus usual appraisal and inspection fees, would be sufficient to maintain adequate FHA reserves and meet all operating expenses. The maximum insurable mortgage could be increased by this amount, in order to avoid making the closing charges too burdensome.

The FHA offers debentures, rather than cash in payment of claims. It was the original thought that FHA might be unable to pay all claims in cash during a wave of foreclosures, and that debentures would be readily acceptable in exchange for surrender of the mortgaged premises; it was also felt that debentures in lieu of cash would obviate the necessity of selling the acquired property in a down market, possibly accelerating a business decline. However, the interest rate on these debentures is established at the time the loan is made, and has fluctuated widely over the years. Some mortgagees will not make an FHA insured loan because they are averse to accepting in payment of a claim, a 3⅛ percent 20-year debenture in exchange for the 5¼ percent fully insured loan they contracted to make. FHA reserves are now more than adequate to pay all claims in cash, and the debenture system should be scrapped. This would induce reluctant lenders to enter the FHA field, and encourage still others to expand their present volume of FHA financing.

FHA allowances for foreclosure and other costs of acquisition of a property following default are entirely inadequate, and in effect reduce the 100 percent guaranty to a figure between 95 and 98 percent. FHA receives an adequate premium for the full insurance of the amount invested by the mortgagee, and FHA should fully honor all legitimate claims by reimbursing the mortgagee for the reasonable and proper costs of acquisition following default.

Sanction of the use of a note and mortgage, rather than a bond and mortgage, would in many areas of the country minimize foreclosure expense and thereby enhance the value of the FHA insurance.

Two of the most troublesome difficulties with this program are the length of time it takes to process an FHA insured loan, and the amount of redtape involved. During slack periods an application for a firm commitment may be fully processed in 10 days to 2 weeks, but during busy seasons the workload has proven greater than FHA can handle with its limited personnel. While allowing FHA a more adequate share of its own generated income from fees and premiums would help materially, it would be uneconomic and wasteful to staff the 75 FHA district offices with the number of technicians required to handle peak loads, since these people would be idle during off seasons.

The most practical solution to this intolerable condition is expansion and extension of the certified agency program (CAP) to every municipality within the jurisdiction of every district office. The plan, which was initiated by FHA Commissoner Mason approximately 1 year ago, has already proven its worth in cutting down processing time, attracting more lenders to the program, and encouraging brokers, builders, attorneys, and the public to "go FHA." Rather than completing the application, obtaining the verification of employment, credit report, verification of bank deposit, contract of sale, and the other exhibits, then forwarding these to the district FHA office for processing and waiting weeks, perhaps months for a commitment, under CAP, approved mortgagees may make their own credit investigation, order an appraisal from a fee appraiser designated by the FHA, and firmly commit the loan on an FHA basis within a matter of 3 or 4 days to a week. After the loan is fully closed the papers are forwarded to FHA for final endorsement of the mortage bond, and in the absence of fraud the bond is so endorsed. An FHA

insured loan processed under the CAP plan is as fully guaranteed as a loan processed through FHA, and is as readily acceptable to the secondary market. This program is of particular value to the suburban or rural lender, whose facilities simply do not permit the paperwork incidental to the satisfying of a distant district office, and who cannot afford the expense of long-distance phone calls or personal visits to that office to expedite cases. But the program is also vitally necessary to our metropolitan areas, where the volume of applications is greatest, and the logjams heaviest.

Too many lenders have withdrawn from the FHA program because they wearied of trying to explain to the applicant, his broker, builder, or attorney, why his case is still pending after 12 or 15 weeks of anxiety. Other lenders have complained of the volume of credit rejects resulting from the FHA's attempt to apply a rigid credit formula. Lenders logically argue that if they are capable of constructively analyzing credit in connection with conventional loans, which account for 70 to 80 percent of their entire portfolio, they can certainly be entrusted with the task of properly screening FHA buyers.

VA allows the mortgagee to charge a 4 percent late charge, and custom dictates a 5 percent late charge in the case of conventional loans. In other words, if the monthly payment is $100, the mortgagee or his servicing agent may impose a $4 charge against the mortgagor if the payment on a VA loan is not made within 15 days of the due date, and $5 in the case of a conventional loan. The FHA allows only 2 percent, which is insufficient to cover the cost of handling and curing a default. While a relatively minor matter, it is still another argument raised against the origination or purchase of FHA loans, and undoubtedly influences some lenders against participating.

FHA imposes a 1 percent penalty for prepayment, which must be transmitted to FHA by the mortgagee upon payoff of the loan. It is the lender who loses the investment he contracted to make for a specific period of years, and the lender—not the FHA—should be allowed to retain this prepayment penalty. Afforded the opportunity of purchasing a nonrefundable bond or other investment at a competitive yield, many lenders currently refuse to consider investing in FHA loans because they may be paid off during a time when the money cannot be reinvested at a comparable yield.

National banks, by limitation of Federal law, may invest not more than 60 percent of their time and savings deposits in mortgages. VA loans, which are only partially guaranteed, are exempted from this restriction; 100 percent insured FHA loans are not. This is an anachronistic situation that should be remedied by the Congress. Exemption of FHA loans would encourage a great many national banks, either at or nearing their 60 percent limit, to invest in this gilt-edged paper, and thereby make a vast pool of additional credit available to the housing industry.

The sale of a brandnew house is frequently dependent upon the purchaser's ability to quickly and advantageously dispose of his present home. Uncertainty as to the price he will net, the time it may take to find a buyer, difficulties and delays incident to financing the second sale, and a host of other problems perplexing to the layman discourage thousands of would-be purchasers from entering into a binding contract for the new house. The same situation characterizes the existing

homeowner's attempt to upgrade into another, more satisfying used house.

The automobile industry, faced with a similar problem, educated its dealers to the necessity of taking the new-car purchaser's auto in trade if an expanding volume of production was to be reached and sustained. This procedure was later extended to the used-car field.

FHA has attempted to facilitate the trade-in process by offering to insure a loan to the builder or broker accepting the trade-in. However, FHA limits the maximum mortgage to 85 percent of the amount to which an owner-occupant would be entitled. Because this restriction forces the dealer—builder or broker—to tie up too much of his working capital in the trade-in, the plan has not worked. Since the dealer must qualify for whatever loan FHA agrees to insure, the maximum mortgage amount should be equal to the amount available to a purchaser-occupant. Amending the National Housing Act to conform to this suggestion would accomplish three desirable purposes; first, dealers would be induced to take more houses in trade, since the trade-in could be more adequately financed; secondly, the trade-in would be more expeditiously and cheaply conveyed to the ultimate occupant by allowing him to qualify for assumption of the maximum mortgage, rather than (as at present) requiring processing a whole new mortgage; finally, by stimulating trades, the entire industry, both new and used, would benefit through increased volume of transactions.

The greatest deterrent to universal participation in the FHA program is the arbitrary, inflexible, frequently submarket interest rate. Various formulas have been offered as a guaranty that money will flow into FHA loans under varying economic conditions, but none has ever been devised that will insure a par market for FHA loans at all times, on all types of residential property, in every section of the country. The current 5¼ percent rate is more than sufficient to attract capital in the Boston area; reasonably adequate in the metropolitan New York area; completely inadequate in California, Texas, Florida, and most other parts of the country. The discount device is an awkward, cumbersome, and expensive method of translating a submarket rate into a market rate, and is repugnant to lenders, annoying to mortgage originators, and the cause of confusion and mistrust on the part of the public. While the foregoing suggestions will materially improve the system and make additional credit available on comfortable terms, the FHA program will never attain its maximum potential in serving the home-financing needs of our people until the crucial interest rate is freed from its present shackles.

Under present law, the Commissioner is allowed to establish a maximum rate from time to time within a statutory limitation of 6 percent. This authority should be withdrawn, and market forces permitted to determine the effective rate within the statutory limitation of 6 percent. Until this is done, countless lenders will refuse to participate; there will continue to be legislative investigations of discounting practices; lenders, builders, attorneys, brokers, buyers, and the public will operate in an atmosphere of mistrust; secondary financing and its attendant evils will remain a continuing threat to the homeowner's security, and the volume of new housing starts will be adversely affected.

A competitive market rate will make Treasury support of FHA loans via the medium of FNMA unnecessary, eliminate completely any excuse for special assistance programs, and channel billions of dollars of vitally needed capital into the housing market.

VETERANS' ADMINISTRATION

Since the inception of the Veterans' Administration home loan guaranty program, more than 5,500,000 veterans have been able to secure satisfactory housing for themselves and their families on terms they could afford. The remarkably low percentage of defaults—less than 1 percent—attests to the soundness of the plan and the universal appeal of homeownerships. Despite the fact that nearly half these purchasers paid nothing down and in many cases were unable to satisfy in cash even the closing charges, they have, nevertheless, weathered the storms of periodic and seasonal unemployment, marital differences, transfer, sickness, and other vicissitudes, and still managed to meet their monthly obligations. This experience has demonstrated anew the fact that buyers will fight to protect the precious privilege of homeownership, regardless of the amount of their equity or lack of equity. There is now increased recognition of the importance of "moral equity" as a factory in determining the security of funds invested in home loans.

In 1944 the Congress wisely developed this program as a means of rewarding deserving veterans with something more tangible and long lived than a quickly dissipated cash bonus, and as a vehicle for the orderly readjustment of the war veteran into civilian life. While nearly 10 million veterans still remain eligible for these benefits, it is unlikely that the Congress will extend this temporary program beyond the present terminal date of July 25, 1960, for World War II veterans, and January 31, 1965, for veterans of the Korean conflict, since there is ample opportunity for these remaining ex-servicemen to "get in under the wire," and the FHA plan offers a suitable and more economically sound substitute thereafter.

It is appropriate at this point to express my opinion as to why the Congress should permit the veterans' program to terminate when the above statutory dates are reached.

In my opinion, the only justification for the veterans' home loan program was to assist the veteran in making his readjustment to civilian life. The dislocation of wartime service resulted in certain disadvantages to the returning veteran in matters such as education, housing, employment, etc. The Congress decreed that the Servicemen's Readjustment Act of 1944 would be the medium through which this assistance or readjustment was to be brought about. The act has served well this purpose.

An extension of the program can be justified only on the basis of the need for further readjustment for these World War II veterans, most of whom left the service 11 and 12 years ago. I respectfully submit that the readjustment factors which motivated the original 1944 act no longer attain for the veterans of World War II.

However, while the VA program is still in effect, the hope of acquiring a home on VA terms will prove but a hoax for the majority of the remaining eligible veterans, unless the frozen VA interest rate is in-

creased to a figure more in line with the market. Congress cannot legislate private capital into any investment that does not compete with paper offering a higher net yield with equal safety. The competition from high grade bonds, stocks, debentures, commercial paper, and conventional mortgage loans is rapidly relegating the VA mortgage to a position of desperate inferiority. The discount device is an unsatisfactory solution, for the reasons outlined with respect to FHA, and presents even greater difficulties because of the substantially increased points necessitated by the 4¾ percent rate, one-half percent below even the FHA rate.

All segments of the industry, the American Legion, even the Veterans' Administration itself, have testified to the urgency of an immediate rate increase if money is to flow into this benefit program.

Recently the American Legion and AMVETS (American Veterans of World War II) at their 1958 national conventions adopted resolutions which would permit greater flexibility in the VA rate in order to make the VA program function more effectively.

To protect the veteran purchaser against an increased rate is simply to ignore the cold realities. Either he pays an increased price, inflated to cover the discount paid by the seller, or he is forced to meet FHA or conventional lending terms; in the case of a conventional mortage, he must frequently settle for secondary and even tertiary financing on an expensive and unsound basis. An increase in the maximum permitted interest rate would be cheaper, less troublesome, more understandable, and the monthly payments easier to handle. It would channel billions of dollars into this form of investment, and insure the purchase of hundreds of thousands of homes on VA terms; terms not presently, nor in the foreseeable future, available to the veteran.

Neither the Congress nor the Administrator of Veterans' Affairs can predict the rate which will prove equally effective on all types of property, under varying conditions, on a national scale. It is my firm belief that only a statutory maximum rate of 6 percent (now provided in the National Housing Act) will bring order out of the present chaos and eliminate the need for the controversial discount practice. By permitting the rate to fluctuate within this 6 percent limitation, competition will see to it that the actual rate on each loan will reflect current market conditions. In the long run the veteran will benefit by the greater acceptability to the industry of the VA program.

Another deterrent to the success of this program is the cumbersome, abnormal length of time it takes to process a case through a VA regional office. Few participants—seller, buyer, broker, builder or lender—can afford this delay, which in many cases amounts to more than 3 months. Again, more adequate personnel would expedite processing, and eliminate much of the friction and aggravation generated, but there is no reason why the principle of the FHA CAP plan could not be extended to VA. Mortgage companies are primary originators of GI loans. As nonsupervised lenders, they cannot close on an automatic basis, but must await receipt of the certificate of eligibility, certificate of reasonable value, and finally the certificate of commitment before they can issue closing instructions on an individual case. In the instance of tracts, it takes weeks, frequently months, before a master schedule of reasonable values is established; then the individual pur-

chaser's application must be processed after that. Use of a VA equivalent of the CAP program would eliminate a great deal of the present confusion and delay, and help to popularize the VA program.

In addition to the annoying and sometimes fatal lags in processing, there is the question of duplicate fees. In order to obtain construction money, most builders find it necessary to process their entire tract through FHA, which means an advance fee of $45 per house ($25 of which is refunded when the house is sold and the buyer qualifies for an FHA-insured mortgage). While the VA will accept FHA construction inspections, the VA insists upon making its own valuation (panel appraisal), for which the builder must pay duplicate fees. This added expense, plus the further redtape and delay, influences many builders to offer their homes on FHA and conventional terms only; the veteran purchaser who cannot meet these terms is thereby denied the home of his choice in the tract.

VA should accept FHA valuations. It is ironic that virtually the same fee appraisers used by VA are also employed on a fee basis by FHA. No point is served by requiring one underwriting agency to duplicate the appraisal process already completed by another underwriting agency—particularly when the first agency has a proven record of 24 years' experience in developing sound appraisal techniques.

FEDERAL NATIONAL MORTGAGE ASSOCIATION

FNMA, or Fannie May as it is popularly called, was intended to provide a degree of liquidity for FHA and VA loans which would smooth the flow of money into these programs, and minimize the stops and starts which had previously characterized the origination of both types of mortgages.

The venture has been partially successful, but can be vastly improved without expense to the taxpayer.

It is fortunate that the provision requiring FNMA to purchase special assistance loans at par has expired, and it is hoped that this type of support program will not be renewed by the 86th Congress. While I am in sympathy with the objectives of the majority of these programs, particularly those designed to implement the realtors' build America better plan for the improvement of our neighborhoods, there is ample discretionary power in FNMA to accord favored treatment to those requiring temporary support—such as the waiver of stock purchase, and handling fee; issuance of advance commitments, etc.

The special assistance program No. 10 concept (purchasing at par FHA's and VA's on new houses costing not more than $13,500) was particularly insidious, not only in favoring one class of buyer over all others, but in diverting a billion dollars in financing away from lenders perfectly willing and able to assist these programs on market terms. There can be no justification for guaranteeing a par market for FHA and VA loans on brand new homes costing $13,500 or less, any more than there could be valid excuse for awarding their builders a cash subsidy of several hundreds of dollars for simply building the homes.

FNMA was intended to operate as an emergency, backstop facility, supplementing the private mortgage market in periods of stress. It was not intended to, nor should it, supplant private investors in the field of FHA and VA mortgages under the guise of "special assistance" or any other catch phrase.

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A realistic approach to the VA interest-rate structure would obviate the necessity for such far-reaching adventures by government into the private market as exemplified by the $1 billion par purchase program approved in the Emergency Housing Act of 1958.

It is the customary practice for mortgage originators, notably FHA-chartered mortgage companies, to process and commit for FHA and VA mortgages, close them with their own funds, pledge them to their banks (called warehousing) as security for loans to provide capital with which to repeat the process. The closed loans are "packaged" and offered for sale to the secondary market; following sale, they are withdrawn from the warehouse bank and delivered to the ultimate investor, thereby providing additional warehouse capacity for further borrowing.

From time to time the secondary market dries up, due to overcommitment, lack of funds, or other well-known and understandable reasons, and the warehouse banks temporarily withdraw the privilege of warehousing unsold loans. The originator is then forced to curtail, or completely shut down his originations, creating a chaotic condition in the real estate and building markets. The home builder, deprived of the FHA and VA terms upon which volume sales depend, is compelled to cut back his starts. The broker dealing in existing houses must resort to less attractive conventional financing, thereby hampering his sales efforts, to say nothing of burdening the home purchaser with more expensive terms. The home-buying public, bewildered by the sudden absence of recently advertised terms, concludes the time is not right to buy, and by sitting on the sidelines precipitates a recession in the major industries, as well as their allied industries.

These recurrent upheavals could be minimized, and perhaps completely eliminated, by reconstituting FNMA as a discount bank, temporarily functioning as a warehouse facility until the banking industry and the secondary market can again operate normally. FNMA should advance commit to warehouse unsold FHA and VA loans for a period of 1 year, advancing the borrower 95 percent of the reasonable market value established by FNMA. The interest charged should be one-half percent less than the interest called for by the mortgage; the borrower would pay a nonrefundable 1-percent commitment fee, and be required to purchase FNMA stock to the extent of 1 percent of the face value of the mortgage. All borrowings secured by pledged mortgages would carry full recourse against the borrower; participants would be limited to FHA-chartered institutions. The capital and surplus required of FHA-chartered institutions, plus the 5-percent holdback, plus the market discount, plus the 1-percent investment in FNMA stock would amply secure repayment of the loan by the borrower. To avoid withdrawal from FNMA and dumping on a possibly still depressed market at the end of 1 year, the warehouse term could be extended for another period of 1 year upon payment of an additional fee of one-half percent.

The maximum mortgage amount FNMA will consider for purchase is presently $15,000. This is a purely arbitrary figure, and should be eliminated. Under the suggested warehousing arrangement, mortgages in any amount insured by FHA or guaranteed by VA would be eligible as security for loans.

It is a fallacy to believe, as apparently some home builders do, that FNMA's discrimination against the used house works to the advantage of the home builder, thereby stimulating the construction of new houses. A constantly diminishing number of new house purchasers are first-time buyers. The bulk of the prospects for new homes must market their present property. FNMA's preferential treatment of FHA and VA loans secured by first mortgages on new, or nearly new houses, militates against the home buyer who would like to purchase a new house, but cannot quickly or advantageously sell his present residence because the same comfortable terms are not available to his buyer. FNMA admits that 90 percent of its mortgage acquisitions are secured by liens on houses 5 years old or less; only 10 percent are on houses over 5 years old.

Also, I believe that FNMA should consider extending its standby commitment procedure to mortgages on existing houses. At the present time such standby commitments are limited to mortgages on new construction.

By issuing a standby commitment at a price 1 or 2 points below the market, a mortgage lender would be assured that the property, neighborhood, etc., meet FNMA's purchasing requirements, in the event the mortgage cannot be more advantageously sold in the secondary market. Under the present procedure, uncertainty as to whether FNMA will accept an FHA-insured or VA guaranteed mortgage on an existing house frequently results in the mortgagee insisting upon conventional terms, not only denying the purchaser the more comfortable FHA or VA payments, but often subjecting him to the hazards of secondary financing. Issuing such a standby commitment would be consistent with sound business principles and make FNMA a more effective tool in the upgrading of the housing standards of the American people. By facilitating the financing and therefore the sale of more existing homes, FNMA would indirectly stimulate the market for new construction, particularly among those homeowners who must sell an existing home in order to purchase a new one.

THE FHA MORTGAGE INSURANCE PREMIUM[1]—AN ANALYSIS AND AN ALTERNATIVE

Dr. ERNEST M. FISHER, Professor of Urban Land Economics, Columbia University, New York, N. Y., and Dr. CHESTER RAPKIN, Research Associate Professor, University of Pennsylvania, Philadelphia, Pa.

The following paper was prepared in response to the following questions:

> What are the premises upon which the premium rate of the Federal Housing Administration is based? To what extent are these premises valid? Should mutuality be continued as a feature of any FHA insurance fund? If so, should any changes be made in existing law or administration?

In the quarter century of its existence, the FHA has performed yeoman's service to the Nation. It assisted in the recovery of a depressed building industry and a harassed mortgage banking system in the depression years of the 1930's. It made it possible for a substantial proportion of the Nation's war housing needs to be provided by private industry and in the postwar period fostered a surge of home ownership that this Nation never before experienced. Since the foundation for the FHA is essentially a series of mortgage insurance systems, the heart of its operation rests on the premium charge.

From its inception it was hoped that the original mutual-mortgage insurance system would be self-sufficient and would not constitute a drain on the Treasury of the United States. So far this has been the case; funds advanced by the Treasury to inaugurate the system and to finance its operations have been returned with interest. All expenses and losses have been paid out of earnings, and in addition, sizable reserves have been accumulated. In fact, these reserves have grown so rapidly in recent years that prior concern regarding the adequacy of the resources of the system is rarely voiced today, and some have begun to suggest that the mortgage insurance premium is larger than that required to cover reasonable contingencies.

We have been asked to discuss the premises upon which the premium rate of the Federal Housing Administration is based and to explore the validity of these premises. In addition, we have also been requested to consider the mutuality feature of the mutual mortgage insurance fund and to suggest any changes that might be made in the existing law or administration.

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[1] Some of the material in this paper has been taken from a report entitled "The Adequacy of the FHA Mortgage Insurance Premium," prepared by Ernest M. Fisher for Senator Jacob K. Javits, and used with the Senator's consent.

FHA METHOD OF CALCULATING THE REQUIRED RESERVE

When the FHA was established by the enactment of the National Housing Act in 1934 there were very scanty statistical materials upon which actuarial calculations could be based and premium rates established. Congress, therefore, provided in the act for administrative determination of the premium within the broad limits of one-half of 1 percent per annum and 1 percent per annum of the face amount of the mortgage.

Provision was made in the act also for the collection of fees, the payment of expenses and losses out of the income received from all sources and for the accumulation of reserves. Borrowers were to be refunded any unearned premiums if they paid their mortgage in full or otherwise canceled the insurance prior to maturity. At the maturity of their mortgages any funds accumulated during their term in excess of expenses, losses, and the modest contribution to general reserves were also to be returned to borrowers. This feature of the system is commonly referred to as "mutuality."

By amendment in 1938, the Administration was authorized to fix the premium at not less than one-half of 1 percent, nor more than 1 percent per annum of the declining balance of the mortgage insured. The programs subsequently established by the Congress have contained the same provision for fixing the premium, but have not contained provisions for mutuality.

The premiums and fees collected in connection with each of the programs then have been determined over a period of 25 years, within the limits established by the Congress. In the meantime statistical and actuarial studies have been made of general mortgage experience as well as the particular record of losses incurred by FHA under the various programs which it administers.

An examination of the adequacy of the FHA premium involves a study of the methods used by the FHA in calculating its required reserves. In determining "required reserves," the FHA employs the actuarial computation known as the "prospective method," which involves the projection of all anticipated incomes and outlays associated with business currently on the books, that is, insurance contracts in force.[2] Each of these series is discounted to the date of calculation. If the present worth of the prospective expenses and losses exceeds that of anticipated income, cash or other assets, called required reserve, in the amount of the difference are necessary if the resources of the system are to be considered adequate. If the actual funds on hand exceed the required reserves, the historical losses or other expenses have been lower than calculated or the insurance premium was higher than was necessary to cover the expenses and losses. Such excess funds can, in time, be distributed as "participations" to persons whose mortgages were insured or set aside to provide for unforeseen contingencies.

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[2] For a more detailed discussion see: Ernest M. Fisher and Chester Rapkin, The Mutual Mortgage Insurance Fund—A Study of the Adequacy of Its Resources, Columbia University Press, New York 1956; Federal Housing Administration, The Twenty-fourth Annual Report for the Year Ending December 31, 1957, Washington, D. C.; Mortimer Kaplan and Samuel A. Miller, Government Insurance of Economic Risk, International Review for Social Science (Kyklos, vol. VIII, 1955. Fasc. 3, pp. 252–276).

There are two income items that are taken into account in the reserve valuation. (1) Premium income calculated at the rate of one-half of 1 percent per year on the average outstanding balance of mortgages in force at the beginning of the year; and (2) prepayment penalties levied on loans paid in full prior to maturity. The maximum charge is 1 percent of the face amount of the mortgage, but cannot exceed the sum of the remaining premiums. The reserve valuation takes 3 expense items into account: (1) The cost of servicing the contracts in force levied at the annual rate of 20 cents per $1,000 of the original face amount; (2) settlement expenses incurred at the time of foreclosure and in the disposition of acquired property; (3) capital losses sustained on acquired property. The present value of the future income and expense elements is derived by discounting these items at the rate of 2.5 percent, the rate of interest that the FHA expects to earn on its assets.

The risk borne by the insurance fund is defined as the difference between the outstanding balance of insured mortgages and resale value of the mortgaged property. The amount of the risk is determined by changes in the aggregate outstanding balance of mortgages insured and by fluctuations in the price of residential real estate. Losses, however, will be incurred only on properties that are foreclosed, then acquired by the FHA and later liquidated at an amount less than the outstanding balance of the foreclosed loan plus expenses. For any given group of insured loans the aggregate outstanding balance, and consequently the magnitude of the risk declines with the passage of time because of terminations and amortization payments. Thus in the absence of variations in house prices, the risk borne by the insurance fund on the existing portfolio diminishes with time.[3] This means that the greatest risk is incurred in the first year of insurance life, in contrast with many other types of insurance where the incidence of claims is either independent of time or tends to increase with the passage of time. But since the insurance premium is a constant percentage of the outstanding balance, it too declines.

In calculating the amount of the prospective risk, a series of assumptions must be made regarding the incidence of foreclosure, the proportion of foreclosed properties that will be acquired by the FHA and the average loss on the acquired properties. Since the FHA has operated almost exclusively in an expanding market, its experience is no indication of what might be characteristic of a declining market. As a consequence, in calculating the required reserve the FHA has not relied on its own experience, but has made provision for a series of market reverses commensurate with those encountered during the depression of the 1930's, insofar as available data permit them to be measured. They reason that if the reserve is adequate to meet market contractions of this magnitude, it can of course weather crises of lesser dimensions.

When a foreclosed property is transferred to FHA, payment of the insurance benefits is made in the form of FHA debentures. Thus, an asset is acquired at the same time that a liability is established. At

[3] If prices rise above the level at the time of valuation, the risk will decline further; and, conversely, if prices fall below this level, the risk will be increased. Thus, the dimension of the risk is in essence dependent upon the interplay in time of the aggregate outstanding mortgage balance and of fluctuations in house prices.

this point there is no drain on the accumulated cash surplus of the insurance fund. This device eliminates the pressure to liquidate acquired properties during depressed periods in order to realize cash; or, to put it another way, it enables FHA to await a more favorable market when presumably prices would rise and losses could be reduced.

The possibility of such a holding operation, through the use of debentures, has been disregarded, however, in the calculations. It has been assumed in estimating losses that depression prices would be obtained for properties acquired and sold by the Administration during that period. Properties acquired during the prosperous phase of the cycle are assumed to command higher prices than those prevailing during the depressed period.

TABLE 120.—*Gross income, expenses, and net income of the mortgage insurance programs administered by the Federal Housing Administration as of June 30, 1957*

Program	Gross income			Expenses				Net income	
	Total	Premiums	Other	Total	Administrative	Other	As percent of gross	Amount	As percent of gross
Total all	$1,160,870,608	$848,648,783	$312,221,825	$483,399,172	$419,362,266	$64,036,906	42	$677,471,436	58
Title I housing insurance fund	5,497,433	3,561,007	1,936,426	2,835,619	2,680,638	154,981	52	2,661,814	48
Title II mutual mortgage insurance fund	757,896,653	547,612,717	210,283,936	331,549,600	308,300,354	23,249,246	44	426,347,053	56
Housing insurance fund	28,777,986	17,869,896	10,908,090	22,129,435	19,318,435	2,811,000	77	6,648,551	23
Sec. 220 housing insurance fund	483,535	78,102	405,433	811,764	808,484	3,280	168	−328,229	
Sec. 221 housing insurance fund	72,305	1,507	70,798	228,079	227,143	936	315	−155,774	
Servicemen's mortgage insurance fund	1,987,332	1,635,789	351,543	818,112	814,797	3,315	41	1,169,220	59
War housing insurance fund	325,814,644	251,076,126	74,738,518	108,453,261	75,313,341	33,139,920	33	217,361,383	67
Housing investment fund	129,908	0	129,908	174,942	66,740	108,202	135	−45,034	
Armed Services housing mortgage insurance fund	25,796,445	16,581,888	9,214,557	6,674,462	6,205,216	469,246	26	19,121,983	74
National defense housing insurance fund	14,414,367	10,231,751	4,182,616	9,723,898	5,627,118	4,096,780	67	4,690,469	33

Source: Federal Housing Administration, 24th Annual Report for the year ending Dec. 31, 1957.

FHA'S INCOME AND EXPENSES

During the history of its operation, the FHA has administered 10 separate programs of mortgage insurance, the total income from which amounted to more than $1.2 billion by mid-1957. (See table 120.) Of this total, approximately three-quarters (73 percent) has come from premiums and the remainder from all other sources, the most important of which is fees. Total expenses have amounted to 42 percent of gross income. Losses on acquired properties represented only 8 percent of these disbursements, while administrative expenses comprised 87 percent of total expenses.

The largest continuing program is represented by the mutual mortgage insurance fund which, by June 30, 1957, had collected $758 million or 65 percent of the total gross income for all 10 funds. As in the case of the aggregate, the major portion (72 percent) of the income of the MMIF came from premiums, 19 percent from fees and less than 9 percent from other sources. Total expenses absorbed $332 million or 44 percent of the total income of the MMIF; over $308 million were disbursed for administrative purposes; that is, administrative expenses alone amounted to 41 percent of total income and to 56 percent of premium income. Only $4 million was needed to meet losses on acquired property.

Title VI, the war housing insurance program, is the second largest of the 10. Its income reached nearly $326 million by June 30, 1957, of which $251 million or 77 percent came from premium payments. The expenses of this program have totaled $108 million, or 33 percent of gross income. It was not until 1945, however, that fees and mortgage insurance premiums were sufficient to cover transfers and expenditures under the program of war housing insurance.

For all the other programs except three, section 220, the section 221, and the housing investment insurance programs, income has been sufficient to pay expenses and to accumulate some net revenue. Net income of these programs varies from 24 percent to 74 percent of gross.

Thus, so far, the Federal Treasury has suffered no losses from the operation of these programs, although three of them have not yet collected enough income to meet their expenses.

INSURANCE RESERVES

The "insurance reserves" represent the accumulation of assets built up from the net income in each program. The "estimated reserve requirement" is a theoretical figure derived by means of the calculation described in a previous section. When these two figures are equal, the system possesses the assets necessary to meet projected claims. Differences between them reveal a surplus or deficiency in the system.

Table 121 presents data on the insurance reserves accumulated as of December 31, 1957, under each of the 10 mortgage insurance programs, as well as the amount of the "estimated reserve requirements" and the excess (or deficiencies) of reserves over requirements. For all 10 programs the accumulated insurance reserves of $538 million fall short of the estimated requirements by only $333,000. This balance, however, exists by virtue of the fact that the mutual mortgage insurance fund possesses over $90 million and the war housing insurance

fund $21 million in excess of their required reserves. These amounts compensate for deficiencies in six of the remaining insurance programs.

TABLE 121.—*Insurance reserves, and estimated reserve requirements in the mortgage insurance funds of the Federal Housing Administration*

	As of Dec. 31, 1957		
	Insurance reserves [1]	Estimated reserve requirements adjusted [2]	Excess (or deficiency) of insurance reserves over estimated reserve requirements, adjusted
Title I housing insurance fund	$3,904,637	$7,276,612	−$3,371,975
Mutual mortgage insurance fund	[3] 374,946,765	284,573,763	90,373,002
Housing insurance fund	8,967,767	30,696,470	−21,728,703
Sec. 220, housing insurance fund	883,591	4,747,246	−3,863,655
Servicemen's mortgage insurance fund	2,961,433	13,166,250	−10,204,817
Sec. 221, housing insurance fund	802,271	203,523	598,748
War housing insurance fund	142,393,148	120,961,402	21,431,746
Housing investment insurance fund	879,128		879,128
Armed services housing mortgage insurance fund	12,824,578	[4] 61,121,108	−48,296,530
National defense housing insurance fund	−10,391,541	15,758,242	−26,149,783
Total all mortgage insurance funds	538,171,777	538,504,616	−332,839
Title I insurance fund	[5] 63,384,853	[6]	
Total all funds	601,556,630		

[1] Includes earned surplus of certain insurance funds transferred to other FHA insurance funds as capital contributions in the amount of $20,310,000.

[2] For mortgage insurance contracts in force. Adjusted for estimated unearned premiums in all 9 mortgage insurance funds in the amount of $52,625,131 to be retained after refunds of unearned premiums upon prepayment.

[3] Includes $95,231,854 as of Dec. 31, 1957, in the participating reserve account, representing balances available for participations, which account may be charged with any net loss sustained by the mutual mortgage insurance fund in any semiannual period.

[4] Excludes reserve requirements for the mortgages endorsed for insurance under sec. 809 with respect to which the military will guarantee the fund from loss. Includes reserve requirements for armed services housing mortgages initially endorsed for insurance under sec. 803 of the act, as amended, and securing housing projects not yet completed with respect to which the military will, upon completion and final endorsement, guarantee the mortgage payments.

[5] Does not include unearned premiums in this fund amounting to $20,739,291 as of Dec. 31, 1957.

[6] Reserve requirements are not estimated for the title I insurance fund. The maximum potential liability under this fund was $285,015,589 as of Dec. 31, 1957, representing the balance of reserves available to qualified lending institutions for the payment of claims. This potential liability was calculated at 10 percent of new proceeds of insurance written less claims paid and reserve adjustments.

Source: Federal Housing Administration, 24th Annual Report for the Year Ending Dec. 31, 1957.

It is also important to note that both these programs reached the point where their reserves are equal to the estimated requirements only after a considerable period of time. The mutual mortgage insurance fund overcame its deficiency for the first time in 1954, after 20 years of operation; the war housing insurance fund reached this position in 1957, 16 years after it was founded and nearly 8 years after it had ceased issuing commitments for any new business.

In contrast, the housing insurance fund in operation since 1950, had outstanding insured balances as of December 31, 1957, estimated at $744 million, and reserves of nearly $9 million, but was still short of estimated reserve requirements by over $21 million. Other wide gaps exist in connection with the servicemen's mortgage insurance fund, the armed services housing mortgage insurance fund (over $48 million), and the national defense housing insurance fund (over $26 million).

The insurance reserves accumulated in the mutual mortgage insurance fund actually serve as a revolving reserve which covers potential liabilities during the early life of insured mortgages when premiums collected are insufficient to meet both expenses and reserve. These funds are later released as premium income accumulates and as outstanding balances decline. They are then available for use in connection with new business put on the books. The amount required is calculated at the end of each 6-month period. Operating income received during the period in excess of expenses and the amount that has to be added to reserves is then allocated to the "participating reserve" account and becomes available for distribution as a "dividend."

It must be remembered that the excess or deficit of accumulated reserves over requirements will change if the basis for calculating the required reserve is altered. For example, if the insurance premium is reduced, the required reserve will be increased because the future income stream is reduced. If the reduction is severe, a current excess can be converted very quickly into a deficit. On the other side of the equation, if the estimate of anticipated losses is reduced by virtue of the introduction of less stringent assumptions regarding the incidence of foreclosure or loss, then the required reserve will cotnract. This will serve to increase any excesses that may exist at the moment, or reduce or eliminate existing deficiencies.

One other point is of significance. The need for reserves, as indicated above, is greatest immediately after insurance takes effect. As time goes on, the amount at risk and the probability of foreclosure both decline. With this decline, the amount of required reserves also declines. But if new insurance is granted, it requires maximum reserves. Thus, in actuality, the aggregate of required reserves may not decline, but may remain constant or increase, depending upon the volume of new insurance written.

SHOULD THE FHA SYSTEM BE SELF-SUFFICIENT?

The first major question underlying all the discussions of the FHA system is concerned with the extent to which the Congress wishes the system to be self-sufficient. In other words, how important is it to maintain the FHA system on a basis which provides sufficient income to meet administrative costs and anticipated losses?

The alternative is a system in which current expenses including losses are met from the Treasury through congressional appropriations. In fact, the VA mortgage insurance and guarantee program is operated in just this fashion. In essence, the argument rests on who shall bear the cost of the advantages that emerge from a mortgage-insurance program. Should the homeowner or investor who presumably receives lower interest rates, longer mortgage terms, and more readily available credit pay for these advantages through the mortgage-insurance premium? Or, despite the advantages received by the participants in the system, is the role of the FHA in promoting homeownership, in aiding the construction of rental housing, and in contributing to the stabilization of the construction and home finance industries of such vital national importance that its costs should rightfully be met from the Public Treasury? The resolution of this question is a matter of public policy which rests with the Congress.

It has been asserted that the elimination of the mortgage insurance premium would reduce total expenditures by obviating the necessity for a complicated bookkeeping system and thus reduce the total cost to the community. The major argument, however, has rested on the fact that the elimination of the mortgage insurance premium would reduce housing costs and thus stimulate demand and, at the same time, make homes available to a lower income sector of the population.

On a $10,000 20-year mortgage bearing the current interest rate of 5¼ percent, the total elimination of the mortgage insurance premium would reduce the initial monthly carrying charges by $4.10. Although the calculation of the effect on housing demand of such a reduction in costs is complicated and lies beyond the scope of this paper, a general approximation of the dimension of the effect can be suggested. Assuming that total monthly housing costs for the owner of a home bearing such a mortgage are approximately $100, the absence of the mortgage insurance premium would reduce monthly costs by slightly more than 4 percent. If the average purchaser of such a home earns $5,000 a year and the ratio of income to mortgage remains the same, a reduction in monthly cost of 4 percent makes available a home of this type to families with annual incomes of $4,800.[4] According to the United States census, approximately 3 percent of all urban families in 1956 received incomes that fell between $4,800 and $5,000 per year; and of the home-purchasing group (i. e., families above $4,000) 4 percent fall within this income range. Thus, the reduction in cost which at first appears to be quite modest, may have a leverage beyond its seeming importance. This is due to the fact that the cost reduction influences a sector of the income distribution in which a substantial proportion of American families are represented.

The increase in demand, however, would be realized only if the prices which purchasers have to pay remain constant or decline. The advantages of reduced carrying charges can very quickly be nullified by an increase in price. Since World War II, the prices that purchasers have paid for single-family houses have risen much more than prices of most other commodities, and some of this excess may be attributable to reduction in the carrying charges which have resulted from easier mortgage terms. Prices are not fixed by the costs which builders incur. When the pressure of demand is great, a reduction in periodic payments made possible by more liberal financing terms may be capitalized into price; i. e., sellers instead of keeping prices constant and thus making a reduction in monthly charges possible, may increase prices and thus keep monthly charges constant. Under such circumstances a reduction in carrying charges would not augment demand; instead its net effect would be to raise selling prices of houses to higher levels and to increase sellers' profits.

On a mortgage for which the initial insurance premium is $4.10 per month, the monthly premium payments will amortize only $408 in 20 years. The same reduction in monthly carrying charge (for the entire term of the mortgage) could be had by a reduction of $408 in the amount of the mortgage. This reduction in the amount of a $10,000 mortgage would mean a reduction of $453 in the price received by the seller if there is a 90-percent mortgage or a reduction of $510 if the

[4] Alternatively, the cost reduction makes it possible for present home-purchasing families to acquire homes of somewhat higher quality for the same monthly outlay.

mortgage is 80 percent of the selling price. In the case of the sale of an existing house, this reduction today would in most instances come from the seller's profits. In the case of the new house, it would in all likelihood come from the builder's profits; or if the builder were diligent enough in saving on costs he might be able to get half ($255) or more of it from such savings and have to take only $255 or less of it out of profits. And it is to be noted that for every new house sold, between 2 and 3 old or used houses find sellers as well as buyers. All these transactions presumably would be similarly affected by a reduction in the FHA premium rate.

It thus appears that the effect of the elimination of the mortgage insurance premium may depend upon the state of the market. On the one hand, it may result in the stimulation of demand; on the other, the advantages may not be passed along to the consumer, but may instead serve to increase house prices and the profits of the sellers of houses. Policy decisions, therefore, regarding self-sufficiency within the FHA insurance program must rest on questions of principle rather than expediency. In essence, Congress must decide whether it wishes the borrowers to bear the cost of insurance or whether the public at large receives sufficient benefits to justify meeting the charges from general taxpayments.

MARGINS OF SAFETY

The second major policy question concerns the severity of the contingencies for which provision is made. We have previously observed that the amount of the required reserve is a direct function of assumptions made regarding losses that the FHA may incur. Strictly speaking, this formulation is not accurate. The FHA calculation is not based upon a forecast of future events and conditions. The calculation makes provisions for market reverses presumably of the dimensions experienced during the depressions of the 1930's. Moreover, it posits the worst possible combination of circumstances in that the entire portfolio is assumed to be exposed immediately to the forclosure and loss experiences of the depressed years.

No account is taken of the strategic feature of the FHA insurance plan—the use of debentures which eliminates the drain on the accumulated cash surplus and makes it possible to hold foreclosed properties until the market improves. While it is evident that no insurance fund can or should provide full protection in the event of a total economic collapse, the FHA has indeed made provisions for contingencies as severe as, if not worse than, those experienced in the past.

In considering a change in the mortgage-insurance premium, Congress is, in effect, evaluating the merits of the series of FHA assumptions. What is the likelihood of a repetition of economic reverses of an order commensurate with the great depression? Congress may well take the view that major depressions are a thing of the past in the United States. Governmental commitments to long-term growth and stability and the ever-increasing knowledge of the operations of our economic system make possible the exercise of policies and devices that may preclude a repetition of the experiences of the 1930's. These are well known and need not be repeated here. In addition, the banking system, because of various institutional and legal factors, is in a much stronger position to withstand both the impact of large-scale

mortgage arrearage and foreclosure and the simultaneous demands for the withdrawal of cash by depositors. Moreover, the widespread use of the amortized mortgage and, in fact, the FHA itself are stabilizing factors which serve to mitigate reverses that may lead to a major decline. In addition, a long-term upward movement of virtually all price series in the United States helps to reduce the likelihood of cash losses on acquired property. Of major importance, perhaps, is the fact that steps will undoubtedly be taken to prevent a massive wave of foreclosures and the dispossession of large numbers of families from their homes. Should Congress hold the point of view expressed in this paragraph, it may feel that insurance provisions for contingencies commensurate with a major depression may, indeed, be conservative, if not excessive.

On the other hand, a diametrically opposite view may be adopted. Some analysts have held that our economy has been beset by depressions of increasing severity. They point to the fact that the last major depression, that of the 1930's, was worse than any experienced before in the history of this Nation. They further assert that the next depression will not be merely a minor perturbation such as we experienced several times in the years following the end of the Second World War, but will, indeed, be cataclysmic. If this point of view is taken, then the provisions made by the FHA to maintain its solvency may not be sufficient, and, in fact, if self-sufficiency of the FHA insurance system is desired, a rise in the insurance premium will be necessary.

The adequacy of the FHA's resources to meet the losses for which provision is made depends, as we have said, upon the required reserves. In turn, the amount of the required reserves depends upon the assumptions regarding the losses which will be borne. Should Congress decide that the assumptions employed presently are too stringent, then a new reserve calculation may be called for, based upon less drastic assumptions.

Some indication of the change in the amount of the required reserve that takes place when the FHA assumptions are varied is to be found in table 122. The illustrations presented here were calculated in 1954 and relate to one section of the mutual mortgage-insurance fund. For this section of the fund, required reserves based upon FHA assumptions amounted to $90.9 million. When the rate of title transfer assumed by the FHA was reduced by 25 percent, the amount of the required reserve dropped to $39 million, a decline of 57 percent. When a similar reduction was made in the FHA's assumed rate of insurance loss and of settlement expenses, required reserves shrank to $57.6 million and $69.8 million, respectively. Table 122 also presents the results of calculations which assumed further declines as well as increases in the FHA assumptions.

TABLE 122.—*An illustration of the effect of FHA required reserves of varying basic assumptions (calculation for mortgage group with term of 20 years, interest rate of 4½ percent and mortgage rating of 60 to 100), as of Dec. 31, 1954*

Percent of FHA's assumed rate	If assumption is varied regarding rate of—		
	Title transfer	Insurance loss	Settlement expenses
150	$205,100,000	$160,000,000	----------
125	148,100,000	125,400,000	$113,300,000
100	90,900,000	90,900,000	90,900,000
75	39,000,000	57,600,000	69,800,000
50	26,000,000	29,000,000	----------

Source: Ernest M. Fisher and Chester Rapkin, the Mutual Mortgage Insurance Fund, Columbia University Press, 1956.

It is essential in this discussion to remember that we are discussing a mutual insurance system. Thus, the assumptions regarding losses to be incurred are reduced in their ultimate significance. If, in retrospect, disbursements are less than those for which provision was made, the FHA distributes the difference to the participants. This means that, if the insurance premium was higher than was indeed proved necessary by actual events, the contributors to this system are refunded part of their payments. This procedure makes it possible to levy a fixed insurance premium and at the same time takes differences in risk into account. Thus, provision can be made for higher risks than might ordinarily be considered without penalizing the mortgagors in the event a small loss is sustained. Given a choice in the matter, however, the mortgagor may well prefer a reduction in monthly charges to a lump-sum refund after his mortgage is paid in full. A reduction in expenses in the years when the homeowner is rearing his family may be more important to him than the accumulation of a sum that matures after his major financial obligations are met. In a growing family, the time preference for money, even small sums, tends to be high.

RECOMMENDED—A SINGLE PREMIUM

There is a way in which the initial monthly payments of the borrower can be reduced without altering the essence of the current actuarial basis of the program. This could be accomplished by collecting from the mortgagee, at the time the mortgage is insured, the discounted amount of the premiums scheduled for the entire term of the mortgage. The regulations, in turn, might permit the mortgagee to collect the amount of the premium from the borrower or to secure from him an obligation to pay the amount advanced over the whole term of the mortgage in equal monthly installments, just as the mortgage amount advance is repaid. This, in effect, is the way in which the premium is collected from the borrower under the present procedure, except that the monthly payments decline from year to year.

Under existing legislation, the FHA Commissioner is authorized to "require the payment of one or more such (annual) premium charges at the time the mortgage is insured, at such discount rate as he may prescribe not in excess of the interest rate specified in the mortgage."

Since the amount advanced by the mortgagee for premium would

be amortized only over the entire term of the mortgage, FHA would need authorization to include any unpaid balance in calculating the amount of debentures to be issued upon settlement of a claim after foreclosure.

A hypothetical case will illustrate the effect of the proposed change. In insuring a $10,000 25-year mortgage bearing interest at the current 5¼ percent, FHA would collect from the mortgagee a single premium. If the premiums scheduled under the existing regulations were discounted, say, at 2½ percent (the rate of interest earned on investments of the insurance fund), this single premium would amount to $603.32. In turn, the mortgagee would take from the borrower an obligation to amortize the $603.32 over the 25-year term at 5¼ percent interest by paying monthly an amount which would amortize *both* the principal amount of the mortgage ($10,000) and the single premium of $603.32. The borrower's total monthly payment would be $63.62. Of this payment, $60 would be required to amortize the principal amount of the mortgage, and $3.62 to amortize the single premium advanced. Thus, the *initial* monthly payment on account of mortgage-insurance premium, which is $4.13 under current regulations, would be reduced to $3.62. Where the single premium is financed at the same rate of interest as the mortgage advance, the total cost to the borrower for mortgage-insurance premiums is larger than the total cost of scheduled premiums under present procedure which require an annual premium. The explanation lies in the fact that the calculation of the single-premium equivalent of the scheduled annual premium reflects discounting at a rate equivalent to 2½ percent interest, whereas the borrower pays 5¼ percent on the unamortized portion.

There would be a number of advantages in applying this method of collecting the premium. The payment of the premium would be made easier for the borrower by permitting payments to be spread evenly over the whole term of the mortgage. The mortgagee would have additional funds invested at the rate of interest permitted by the regulations. FHA would benefit from receipt of funds when the risk is at the maximum and would be relieved from bookkeeping and collection processes.

If applied to the mutual mortgage insurance program, dividends to borrowers would continue to be large after the first 5 or 6 years of insurance, so long as a widespread depressed market situation is not encountered. Thus, borrowers would continue as in the past to pay only the actual costs of insurance so far as these can be accurately ascertained by FHA. But there probably would be some shifting of costs between those who prepay and cancel their insurance early in the life of the mortgage and those who continue to carry the insurance longer toward maturity of their mortgages.

In case of cancellation of the insurance in the early years of the life of the mortgage, the mortgagee would be authorized to collect the unpaid portion of the premium advanced less the amount of participating dividend calculated by FHA to be due to the borrower. If the record of expenses and losses continues at a rate similar to that which has been experienced, it is estimated that these participating dividends would begin early in the life of the mortgage and would be equal to the remaining unpaid balance by midterm or earlier. In case of foreclosure and filing of claim by the mortgagee, in calculating the

amount of debentures to be issued FHA would include the unpaid balance of the premium advanced by the mortgagee.

The single payment plan does not eliminate the need for a large reserve in the early life of the mortgage. The single premium equivalent of the present premium schedule would not provide enough funds to pay all operating expenses and provide for the estimates reserves until 4 or 5 years had passed. In order to meet these needs, it is necessary and important to preserve the resources accumulated over the past years and presently held for this purpose.

The single premium of $603 was calculated on the assumption that the mortgage will continue in existence for the full 25-year term. The FHA, however, reports that mortgages in the maturity class of 23 to 25 years have an estimated life of 10.23 years. If the single premium is calculated for the estimated life rather than the maximum term, with allowance for a gradual increase in the average life of this class of mortgage to 15 years, then the amount of the premium is reduced to less than $450. It is at approximately this period that the present value of the cumulative periodic payments for the single premium and the annual premium is equal and that the present value of all payments in the event of prepayment constitutes 95 percent of the maximum.

Applied to the other mortgage-insurance programs, the same advantages would be realized except that the mortgagors would receive no participating dividends. A schedule of refunds on account of unearned premium might be set up by FHA, however, for use in accepting applications for cancellation of insurance prior to the maturity of the mortgage.

It should be noted, however, that there are administrative problems involved in the adoption of such a method of collecting premiums. But these probably are not insurmountable. FHA could estimate quite closely whether the advantages of such a program would be outweighed by these difficulties.

Also FHA probably would be able to make calculations in advance which would indicate the amounts and the period of time necessary to accumulate required reserves under existing programs or other proposed programs of mortgage insurance. It would seem advisable for the Congress to request the Federal Housing Administration to prepare and submit reports of such calculations when it is considering legislation affecting mortgage insurance.

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FHA PREMIUMS AND FUND MUTUALITY

HARRY HELD, Vice President, The Bowery Savings Bank, New York, N. Y.

This paper has been prepared in response to the following questions assigned to me:

> What are the premises upon which the premium rate of the Federal Housing Administration is based? To what extent are these premises valid? Should mutuality be continued as a feature of any FHA insurance fund? If so, should any changes be made in existing law or administration?

In considering the first two questions posed, regarding the premises of the premium rate and the validity thereof, we must necessarily begin with some historical background, after which facts will be developed on the assignment.

The original National Housing Act of 1934 provided for the collection of a minimum premium on the insurance written by FHA "(to be determined in accordance with the risk involved) which in no case shall be less than one-half of 1 percent per annum of the original face value of the mortgage." In 1935 the act was amended to authorize the collection of a special premium in case of prepayment of the mortgage and cancellation of the insurance by the mortgagee prior to maturity of the mortgage. This premium was fixed by rules and regulations at 1 percent of the original amount of the mortgage but not more than the aggregate amount of premiums which would otherwise be paid. In 1938 the Housing Act was again amended, setting forth a new basis for calculating the minimum mortgage insurance premium. This amendment required that the insurance premium rate (one-half of 1 percent per annum) should be applied to the amount of the principal obligation "outstanding at any time without taking into account delinquent payments or prepayments." [1]

Since 1939 the insurance premium has been set by rules and regulations at the minimum prescribed by law, i. e., one-half of 1 percent per annum on the outstanding balance of each mortgage.

The origin of the minimum one-half of 1 percent per annum premium for mortgage insurance in all probability can be traced back to the operations of private mortgage guaranty companies which flourished in the 1920's. Under these operations guaranty certificates were issued to banks and the public on the basis of a guaranteeed rate of return on a specific mortgage (or a group of mortgages), which was set at one-half of 1 percent below the contract rate of such mortgage or mortgages. While the concept of mortgage insurance was not a new one, many features of the FHA plan were new. The initiation and support of the plan by the Government providing initial funds, the Treasury guaranty of the principal and interest of the debentures

[1] Except for the 90 percent $5,400 mortgages made prior to July 1, 1939, on which the rate was set at one-fourth of 1 percent per annum on the outstanding balance.

issued in payment of claims, and the creation of a mutual mortgage insurance system all involved new approaches to a mortgage guaranty objective.

In setting up the mutual mortgage insurance system in 1934, it was envisioned that the system could become and remain self-supporting. Up to the present time not only has this objective been realized but since 1944 dividends have been paid from the mutual mortgage insurance fund in the amount of $68,411,166 up to December 31, 1956, to 539,428 mortgagors whose mortgages were paid in full. In addition, funds originally advanced by the Treasury have been returned in full with interest and all operating expenses, losses, and reserves for future losses on outstanding guaranteed mortgages are being met out of insurance premiums being collected. Notwithstanding these most remarkable achievements, no severe test of the whole system has developed.

Looking objectively at the question of the premises upon which the premium rate of the FHA is based and the extent of its validity, it would seem that it undoubtedly is necessary to collect insurance premiums beyond the actual point where real exposure terminates in order to maintain the solvency of the insurance fund. This philosophy, coupled with the unanimity of opinion that FHA should be a self-sustaining organization, necessitates the collection of a premium adequate for the worst experience which can be justifiably anticipated. Insofar as the mutual mortgage insurance fund is concerned, such fund permits FHA to adjust actual premium charges by the issuance of participation shares to mortgagors from the fund in the light of the mortgage experience which develops for particular classes of insurance contracts over a period of years. For the special-purpose programs not a part of the mutual mortgage insurance system, it must be more or less presumed that the established insurance premium will have at least some chance to make the special purpose program self-sustaining. With the exception of the servicemen's mortgage insurance fund, the mutual mortgage insurance fund, and the section 221 housing insurance fund, the FHA Commissioner has authority under section 219 of the National Housing Act, as amended, to transfer resources among the other seven funds as assistance may be required. This device of flexibility in the use of resources of separate funds can provide important financial support to the separate funds and to a great degree add to the sustainability of the funds involved at present premium requirements.

The matter of FHA insurance reserves was thoroughly explored in 1953 by the Subcommittee on FHA and VA Programs of the President's Advisory Committee on Government Housing Policies and Programs (see pp. 34–40 on mutual mortgage insurance system) and also by the Commission on Organization of the Executive Branch of the Government in 1955. The following quote from the report to Congress in March 1955 of the Commission on Organization of the Executive Branch of the Government combines in summary the findings and recommendations of both the Commission and the subcommittee of the President's Advisory Committee on the subject:

> It seems to us that the adequacy of Federal Housing Administration reserves should be thoroughly explored, particularly in view of the low minimum equities which have

been required in many of these loans and guaranties. The report of the President's Advisory Committee on Government Housing Policies and Programs (December 1953) also demonstrates its anxiety in this matter as follows: "It is generally recognized that, since the establishment of the Federal Housing Administration in 1934, there has been an almost constant rise in real property values and that in consequence there has, as yet, been no test of the adequacy of the loss reserves of the Federal Housing Administration during any prolonged period of declining property values." As a consequence this Committee recommended that "an objective and independent long-range study of prospective foreclosure and loss experience of the Federal Housing Administration's insurance programs should be made." We concur with this suggestion.[2]

Mainly as a result of the recommendation of the President's Advisory Committee that an objective, independent long-range study be made of the prospective foreclosure and loss experience of the FHA mutual mortgage insurance program, such a study was undertaken in the fall of 1954 by the Institute of Urban Land Use and Housing Studies. The results of this study, completed in 1956, were published by Columbia University Press under the title "The Mutual Mortgage Insurance Fund—A Study of the Adequacy of Its Reserves and Resources" under the authorship of Dr. Ernest M. Fisher and Chester Rapkin. In the preface to this volume full credit is given to the general assistance and fine cooperation of the FHA staff in making available the necessary information and research material which made the study possible.

Using the first 20 years of FHA operations, the Fisher-Rapkin study has this to say in answer to the question "Are these resources sufficient to enable the fund to stand on its own feet?":

> This major question cannot be answered with mathematical or actuarial precision. For there is no way of calculating with certainty the magnitude of changes in housing markets and in the general economic situation that will determine (1) the rate at which the liabilities of the fund in outstanding debentures may increase, or (2) the extent to which properties taken over when debentures are issued will be disposed of at prices sufficient to liquidate the debentures.
>
> Both the rate of debenture issue (or property acquisition) and the proportion of the costs incurred in acquiring, operating, and disposing of properties which are likely to be recovered are affected by the characteristics of outstanding current insured balances rather than of insured mortgages at the date of endorsement. The most important characteristics of outstanding balances in this connection are probably (1) the ratio of outstanding balances to original appraised value and to current market value of properties, (2) the original size or face amount of the mortgages on which outstanding balances

[2] Commission on Organization of the Executive Branch of the Government, Lending Agencies, a Report to the Congress, March 1955, pp. 27–28.

are still insured, and (3) the age of the mortgage loans on which insurance is in force.[3]

With reference to the liabilities of the fund, it was further stated that:

> It must be constantly borne in mind that the liabilities of the mutual mortgage insurance fund are not measured by insured outstanding balances. These measure only the maximum contingent liabilities, only a portion of which ever mature into claims, and through the settlement of claims, into actual liabilities. Actual liabilities are in the form of debentures.
>
> Whenever debentures are issued as liabilities, a property is taken over as an asset. Since the term of debentures is some 20 years, there is no necessity for FHA to convert these property assets into cash before the debentures mature and become payable. In case of depression, then, FHA would not be obliged to meet the double peril of a high rate of foreclosures and low prices for acquired properties. It could "ride out the depression," retaining the properties until they could be liquidated in an orderly market, renting them in the meantime.
>
> If such a policy were pursued, the role played by reserves and surplus would be that of absorbing any operating loss sustained during the holding period (including interest on debentures) and any disparities between the cost of acquisition of properties and the price that could be obtained for them *in an orderly market* after the depression or, at least after the worst phase of the depression had passed.
>
> And during this whole period FHA would be receiving income from mortgages which have not been terminated.[4]

In evaluating the validity of the premises upon which the premium rate is based, the next logical exploration is in the area of FHA operations. In the 23d Annual Report of the Federal Housing Administration under the heading "Analysis of Reserves of Insurance Funds," there is a good explanation of the underlying philosophy and actuarial consideration with respect to the insurance funds under its jurisdiction.

Excerpts from this report, which are pertinent to this study, are quoted at length in the appendix. Salient points covering method and theory in FHA insurance operations involve:

1. Each of the funds is credited with fee, premium, and investment income and is charged with administrative expenses and insurance losses with respect to loan and mortgage insurance contracts assigned to the fund. The earned surplus of a fund, representing the accumulation of net income and the capital contributed by other FHA funds, is available to cover future contingent losses and related expenses.
2. Since the incidence of an economic reversal cannot readily be predicted, the most conservative basis for reserve valuations for

[3] Ernest M. Fisher-Chester Rapkin: The Mutual Mortgage Insurance Fund, Columbia University Press, 1956, pp. 146–147.
[4] Fisher-Rapkin, p. 148.

such future losses and expenses is to assume that adverse economic conditions of approximately depression magnitude might develop immediately. Thus, the liabilities of FHA's mortgage insurance funds are contingent liabilities because the risks which the funds underwrite are economic in nature and cyclical in pattern, and the events insured against do not occur in substantial proportions except under the contingency of a depression.

3. A balance status for a fund exists when its earned surplus is equal to or greater than the estimated reserve requirements. When a balance status is attained, the fund has sufficient resources to meet such future insurance losses and expenses as might be incurred in the event that adverse economic conditions of approximately depression magnitude were to develop immediately.

The question of the actuarial calculations and the adequacy of the reserves set up by FHA out of insurance premiums was examined and tested in connection with the Fisher-Rapkin study. Comparison was made with statistical data on mortgage losses and the conclusion was reached that—

> On net balance, it appears that the FHA calculation is based upon premises that should make adequate provision for contingencies of major depression magnitude.[5]

The Division of Research and Statistics of the FHA categorically states that there is no basis for finality in an actuarial judgment as to the ability of the mutual mortgage insurance system to operate with a lower premium than the present schedule provides. FHA actuaries feel that the FHA reserve assumptions have been made on a conservative basis and point out that conservatism is essential to the sound management of any insurance program, particularly a program which is subject to such wide variations of experience as might be anticipated for home mortgage insurance.

Attention is also called to the fact that a part of the burden on FHA insurance premiums is determined by FHA initiation costs and that since these costs are not covered in their entirety by initiation fees, premium resources must be allocated to these costs.

Although it is possible that the conservatively established premiums collected by FHA may actually be greater than necessary, the following compensating factors should be borne in mind with respect to the mutual mortgage insurance system:

1. The payment of participating dividends from the mortgage insurance fund participating reserve account permits FHA to adjust *actual* premium charges to actual insurance costs for individual mortgage transactions in the light of the mortgage experience which develops for particular classes of insurance contracts over a period of years, and

2. Such adjustments can and do reduce premium charges to an absolute minimum for the benefit of the mortgagor, while at the same time assuring FHA during the life of the mortgage sufficient resources for anticipated operating expenses and losses as well as a marginal excess of resources as a special protection for unpredictable emergency expenses.

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[5] Fisher-Rapkin, p. 153.

As to possible losses, a study of prospective foreclosure and loss experience in the housing field could only be based upon the previous experience of the 1930's, modified by the changing pattern of mortgage lending since that period. The results undoubtedly would be inconclusive from the standpoint of developing actuarial standards for an insurance reserve program. However, a case could probably be made that a real estate depression of the magnitude of the 1930's would probably not occur or could be substantially controlled.

A minority report of the House Committee on Banking and Currency made prior to the passage of the National Housing Act revealed the following facts:

> 1. That so long as any considerable amount of distressed property existed and continued to depress realty values, new construction could not be anticipated.
> 2. There were $21½ billion in home mortgages in the United States and these were coming due at the rate of $2 billion each year.
> 3. That mortgage distress which was resulting was due not so much to homeowners' unemployment as to their inability to refinance these short-term mortgages which were coming due.

Item 3 of this report would seem to indicate that the real estate depression of the 1930's would not have been so deep if the FHA type of long-term fully amortized mortgage had been in existence prior to the depression. FHA mortgages requiring no renewal and being amortized from their inception would under this assumption fare better than the home mortgages which were in existence prior to 1930. Also to be borne in mind is that before the 1930's the practice of having second purchase money mortgages on homes was widespread, whereas FHA has eliminated this practice. Mortgage losses of institutions on first mortgages of 60 to 70 percent of value were substantial in the depression years; however, a projected study of FHA losses in a future depression would have to take into consideration that one of the principles of FHA is to stabilize the real-estate market. This would entail the retention of acquired property by FHA rather than selling at distress prices. This FHA could do because of the 20-year term of its debentures, and during the period in which it held such property, rentals could undoubtedly be obtained to cover costs of operation and taxes and possibly show a small return on investment. Also to be considered is that in the event of a depression, FHA could by regulation permit approved mortgagees to make contract modifications for the purpose of avoiding foreclosure. Another pertinent factor of consideration in possible loss analysis on FHA mortgages in the event of a future depression is that FHA has limited the maximum amount of mortgages it would insure. In a study of mortgage investment risk it was stated that—

> Another finding with firm roots in economic and social conditions is the fact that large residential loans occasioned larger foreclosures and losses. Presumably, this reflects both a long-term and cyclical leveling down of family income and a decrease in family size, either depression bred or secular in nature—which, is not yet clear.

Commenting on this phase of risk, the author further stated:

> However, this particular risk factor could provide us with an excellent example of the danger of mechanically extrapolating past trends without digging beneath for underlying conditions which may no longer apply. First, and obviously, size of loan or price of property with which it is associated has different meanings at different price levels. Second, whereas the 1920's may have seen overbuilding of higher priced homes, Government policy in recent years may have produced overbuilding in the lower priced brackets and building of homes which may prove too small for today's increasing size of family. So tomorrow may not be like yesterday, but we can still learn from yesterday's experience.

The author also comments that—

> better experience has been obtained on owner-occupied homes, on new as against older construction, on loans made at lower loan-to-value ratios and, although the evidence is spotty, on loans providing for full amortization over their terms.[6]

All of the above-mentioned areas of degree of mortgage-investment risk might well be explored in connection with the validity of the FHA insurance premium. Such exploration might well result in a new actuarial concept for determining required reserves and premium requirements. However, in the light of all the studies which have been made recently, and referred to in this monograph, it would seem that—

1. The premises upon which the premium rate of the Federal Housing Administration is based are valid ones, and the administrative and actuarial premises in connection with collection of such premium and the setting up of the reserve accounts are soundly conceived.
2. FHA experience thus far is not sufficient to warrant consideration of a change in rate because of diminished risk.
3. While FHA reserve assumptions have been made on a conservative basis, independent analysis of these reserve assumptions do not indicate that they are unreasonable.
4. Under the mutual mortgage insurance fund, adjustments by the issuance of participating shares from the mutual mortgage insurance fund to homeowners compensate for the possibility that FHA may collect premiums greater than may actually be necessary. In the nonmutual insurance programs, experience would indicate that adequate insurance coverage of the risks involved would not warrant any change in premium at this time.
5. As new mortgages with more liberal minimum downpayments and maximum terms are insured by FHA, the need for an adequate reserve against loss is greatly expanded.
6. In view of the above analysis, no present change should be made in the FHA mortgage premium charge nor the method in which it is collected.

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[6] Some Observations on Recent Studies of Investment Risk, address by Eleanor S. Bagley, December 27, 1952, before American Finance Association.

While this summary of the validity of the FHA premium charge indicates no immediate change, the author would like to suggest the following areas of consideration of possible premium reduction on homeownership property under FHA section 203:

1. In view of the fact that the first 12 to 15 years of an FHA mortgage is the period of maximum exposure, studies should be made of the actuarial soundness of discontinuing premiums beyond, say, the 18th year on a 30-year mortgage and the 15th year of a 25-year mortgage.
2. As an alternative to No. 1, the FHA insurance premium should be eliminated when the loan has been reduced to 50 percent of the original FHA value.
3. The payment of a nonrefundable 2-percent initial insurance charge as prepaid insurance could be considered, together with a proportionate reduction in the mortgage-insurance premium and elimination of the present 1-percent prepayment penalty.

With reference to the first suggestion, FHA experience has indicated that the estimated life expectancy of 1- to 4-family home mortgages insured under section 203 was, at the end of 1956, 8.45 years. In 1951, the life expectancy of these loans was estimated to be 7.55 years. These estimates are based in part on the cumulative termination experience observed over a 20-year period since the inauguration of this home-mortgage program, and in part on a projection of this experience to reflect the life expectancy of mortgages with maturities of 20 years. Because of high level of demand for housing, increase in value of housing, and refinancing of FHA loans during this 20-year period, the life-expectancy figures are probably on the low side. Also, experience with 25- and 30-year maturity loans will undoubtedly result in a much longer life-expectancy level. The Veterans' Administration, in a study of actual termination experience on veterans' loans from the beginning of the program in 1944 through 1955, and an estimation of termination rates during the remaining life of each mortgage maturity class, indicated an average life expectancy of about 11 years for 20-year loans and about 14 years for 25-year loans. Limited experience in 30-year loan maturities precluded making any estimate of their life expectancy. Thus, if we take the Veterans' Administration experience, which has been of shorter duration and reflects more current experience, it is probable that, on the average, maximum exposure would be about 12 years for 20-year loans, 15 years for 25-year loans, and 18 years for 30-year loans. From a loss standpoint, the period involved in each classification would probably be somewhat lower; therefore, the use of life-expectancy data would tend to be on the conservative side.

Regarding suggestion No. 2, it has been demonstrated amply that when a loan is reduced to 50 percent of its original value the possibility of loss is a negligible one. On a 30-year, 5¼-percent loan of $10,000 (original appraised value of property, $10,350), the point at which the loan is reduced to 50 percent of appraised value—that is, $5,175—would be at the end of 19 years 10 months, after which no FHA premium would be collected. During the 19-year, 10-month premium period, FHA buildup of reserve would be approximately 69.14 percent of the amount (plus interest at 2½ percent) which would be collected if premiums were paid for the full 30 years.

On suggestion No. 3, the payment of a nonrefundable 2-percent initial premium could have the effect of reducing the one-half of 1 percent annual premium on reducing balance to an annual premium of three-eighths of 1 percent on the same basis without seriously jeopardizing the insurance requirements as now estimated. The initial service charge could be reflected as part of the closing costs in the sale of the property, to be paid by the purchaser or absorbed in whole or in part by the builder.

Of the three suggested studies, No. 3 would have the immediate effect of reducing insurance premiums. Suggestions Nos. 1 and 2, while reducing the homeowner's premium cost, would require in each case that present premium schedules be maintained for a period of years. Also, under suggestion No. 3, FHA, through the nonrefundable initial fee, could immediately cover initiation expense, and any balance of the initial fee could be put into reserve at once.

Tables 123, 124, and 125 provide, on a comparative basis, an analysis of the effect of the application of suggestions 1, 2, and 3 in relation to premium collection under present FHA regulations.

Proposals for single-payment FHA insurance premiums on 1 to 4-family dwelling loans (sec. 203)

During the past 3 years, proposals have been set forth to convert the method of collecting FHA mortgage-insurance premiums on section 203 loans from the present system of collection of such premiums monthly, based upon declining balances, to one which would be paid in a lump sum at the time the loan was closed. One proposal by House and Home magazine suggested a 2 percent straight premium charge on the face amount of the mortgage, to be added to the mortgage principal, and elimination of prepayment charges and the mutuality system. Another proposal by Fisher and Rapkin advocated FHA collection at the time of endorsement of premiums equivalent to present premiums for all or part of the years of the insurance contract, such premiums to be advanced by the mortgagee at time of closing, but not to be added to the mortgage. Under this proposal, the mortgagee's advance would be repaid by the borrower under the same payment schedule which is now involved in annual premium payments, and would provide for rebating for the benefit of the mortgagor any unearned premium in the event of prepayment. The writer, in connection with a proposal to merge FHA and VA activities in the home-mortgage field, which suggested major changes in insurance coverage, also suggested the possible use of a single initial premium.

Much study have been given to these proposals, and over the years since 1937 I understand that the Actuarial Section in FHA has also considered various single-premium possibilities, and invariably concluded that the annual premium procedure is superior. In any change from annual billing of premiums to a single-payment premium for new loans, FHA while acknowledging an administrative cost saving in billing procedures on the new loans, points out that while present insurance contracts are in force they would be required to maintain dual procedures in operation for premium collection, resulting in additional administrative expense. To change existing contracts would require some 2 million new agreements to effectuate the changeover. Also, FHA annual billing premiums provide a recurring check on the requirement that insured mortgages be held only by insured mort-

gagees which would not be possible with a single-premium payment. Other administrative disadvantages would be involved in securing notification of transfer of mortgages from one approved mortgagee to another and securing notification of termination of contract if no rebate is involved.

In the proposals submitted the required amount of a single-payment premium was not specified in the Fisher-Rapkin outline, and the one by House and Home specified a 2 percent premium based upon mortgage insurance premises of the Canadian Government and English private systems of mortgage insurance. The application of these systems' premium rate would not compensate for relative differences between them and our FHA insurance system in the matter of governmental attitude toward self-sufficiency, differences in coverage and in real estate market conditions.

Tables 126, 127, and 128 would indicate that an initial premium of 5.01 percent to 7.32 percent would be required to attain the same results as are obtained by the collection of one-half of 1 percent per annum on declining balances on a 5¼ percent loan. The 7.32 percent initial premium would be required on maximum term loans, i. e., 30 years.

An objective analysis of the single-payment premium versus the payment-of-insurance premiums on an annual basis on declining balances would indicate that the single-premium concept requires that either the purchaser or the mortgagee must pay the advance premium. If the prospective purchaser should be required to make such payment, his closing costs would be increased by approximately 5 to 7 percent of the total amount of his FHA mortgage. This situation would have the effect of increasing his minimum downpayment by almost a like percentage. If on the other hand the mortgagee added the single-insurance premium to his mortgage, or advanced such premium as a separate loan to be paid back in the same manner as the annual mortgage insurance premium is collected at present, the mount of the mortgage (or the mortgage amount plus the additional insurance advance) might well make his total investment greater than the FHA valuation of the property. Each method would prove unpopular, either to the purchaser or to the permanent mortgagee. If the initial premium were advanced by the mortgagee, the owner would be required to pay it back with interest, probably at the same rate of interest charged on the mortgage. In this case there would be relatively little or no saving over the present premium paying procedure. If, on the other hand, the purchaser paid the premium in advance, his monthly payments on a 30-year $10,000 loan at 5¼ percent would be reduced by about $4.15 per month the first year of the loan and constantly reducing amounts during the life of the loan. It is questionable if the prospective purchaser would find the lower monthly payment attractive enough for him to invest an average of 6 percent of the purchase money mortgage on an initial premium basis.

As there is no inequity involved in the present premium and its method of payment, it would seem on balance that the present system is more desirable than the single-payment insurance concept.

The latter part of my assignment poses the questions "Should mutuality be continued as a feature of any FHA insurance fund? If so, should any changes be made in existing law or administration?"

Title II, section 203, of the National Housing Act established the FHA's permanent residential-type insurance program which has been in effect since 1934. With respect to this particular program, the Congress provided for a mutual mortgage insurance fund, a system of mutuality whereby that portion of the mortgage-insurance premium paid by the borrower, but not needed by FHA to conduct its operations, would be returned to the borrower following payment in full of the insured mortgage. The basic objective of this legislation was to make the permanent home mortgage lending insurance operation one which would be self-sustaining and nonprofit. As pointed out previously, this type of operation enables FHA to collect a uniform premium which actuarially provides for operating expenses and loss reserves in a variety of risk classifications. Existence of a system of dividends distributed after termination of the insurance contract permits, as pointed out previously, adjustment of net premium expense to the variations in risk which become apparent during actual operating experience. The ability to make a uniform insurance charge on variable risks, with adjustment based upon actual operating experience, also has the advantage of economy in administrative procedures which are possible only with a uniform insurance charge. Under this type of operation a uniform premium charge which is confidently expected to be ample for any emergency can justifiably be assessed, as any excess premium is rebated by dividend distributions. Such dividend distributions are currently at the rate of about $8 million per annum and while this may seem to indicate excessive uniform premium charges in the past, it must be borne in mind that throughout the last two decades relatively minor losses have been sustained on real estate mortgages.

Alternative methods to the uniform premium charge adjusted by dividends based upon actual experience would fall into two categories. First, there could be evolved a classification of mortgages according to qualitative characteristics or distinctions and an assignment of various premium rates in each classification based upon degree of risk. This method would not only prove cumbersome in operation but would also be very unpopular with the general public and home-building industry, even if formulas to measure the degree of risk could be computed actuarially. The second method would be to collect an insurance premium, based upon no mutuality, and make adjustments from time to time to avoid collection of excessive premiums or the need for calling upon the Treasury to redeem debentures. While this method would maintain the nonprofit and self-sustaining principles of the program, it also would be cumbersome, and in addition would be less equitable to homeowners than the present system. Thus, it would seem that the use of the uniform premium concept under the mutual mortgage insurance method is sound and should be continued. This method which equitably compensates mortgagors through participating dividends for the difference between premiums paid and actual experience, and at the same time provides for adequate premiums to meet operating expenses and actuarially determined reserve requirements, seems the best one to meet the test of maintaining this program on a self-sustaining and nonprofit basis as originally conceived.

The two most frequently stated objections to the use of the mutual mortgage insurance system under FHA section 203 are, first, that if

mutuality were discontinued, a lower premium rate could be charged, thereby reducing monthly mortgage payments, and, second, that the mortgagor who receives the dividends from the mutual mortgage insurance fund in a substantial number of instances is not the one who paid the major portion of the premiums.

With reference to the first objection, there would not seem to be any actuarially sound basis for assuming that the premium rate could be reduced, mutuality notwithstanding. As the need for premium income and reserves depends upon future experience and loss factors, which cannot be determined with any measurable degree of accuracy at the present time, there would seem to be no validity in the assumption that a lower premium without mutuality would continue to make the permanent home mortgage insurance function of FHA self-sustaining.

The second objection which suggests no payment of dividends to mortgagors who have paid only a small portion of the premiums would, if put into operation, strike at the roots of the mutuality and nonprofit concept of the home-mortgage insurance program. This objection overlooks the fact that the fund in a deep depression period would probably not be in a position to make any dividend distributions and attempts to place the emphasis upon the individual loan rather than on the collective funds. Also to be considered is that when an original mortgagor conveys his property to a subsequent owner he in effect conveys his rights to any accumulation in his reserve in the mutual mortgage insurance participating reserve fund, and that any rights to accumulation become fully confirmed only upon the payment of the mortgage debt in full and the cancellation of insurance.

An objective analysis of all the factors involved would indicate that the mutuality system basically is the only means by which FHA can in fact be operated in the best interests of the homeowners without profit and without loss.

The continuance of the mutuality system under title II, section 203, is basic to the soundness of this mortgage-insurance program for the following reasons:

1. The homeowner is in no way penalized if actuarial considerations in setting the mortgage-insurance premium, at the time the loan is made, prove in actual experience to be higher than necessary to cover operating expense and losses sustained in his statistically grouped classification.
2. FHA is enabled to maintain this program on a nonprofit and self-sustaining basis.

While mutuality is favored under the basic FHA title II, section 203 program, it is not favored for the other programs administered under FHA, with the sole possible exception of the title II, section 213 program for cooperative housing. The reason for this single exception is that cooperative housing can be classified as a concept of homeownership, and it would seem that the mutuality benefits which are derived by a homeowner under section 203 logically should be available also to owner-tenants under the section 213 program and most particularly where such cooperatives are sponsored by nonprofit organizations. As far as the other FHA programs are concerned, these are special-purpose programs or pure business ventures from

which continuing profits are anticipated by the sponsors. In the special-purpose programs substantially greater risks are present than in the home program category and in the rental housing programs there is little need for a mutuality feature, as the insurance premium is considered an item of operating expense in setting up these projects.

In view of the foregoing findings, the following conclusions seem warranted:

That a case could probably be developed based upon FHA experience from 1934 to date for a lower premium charge on mortgages involving owner-occupied homes. On the other hand, such a reduction in premium charge would tend to weaken FHA's ability to meet a depression of any great magnitude or duration on a self-sustaining basis.

Independent analysis (the Fisher-Rapkin study) has indicated that FHA calculation is based upon premises that should make adequate provision for contingencies of major depression magnitude.

Liberalization of eligibility requirements of the mortgages which FHA is authorized to insure, such as has taken place in the maximum term permissible and maximum loan-to-value ratios, will tend to place more strain upon reserves and resources of the system in the event of a situation occurring which involved widespread foreclosure and loss experience. This factor in and of itself would argue against a reduction in the premium rate.

Successive reductions in downpayments and lengthening of mortgage terms have also greatly reduced equity buildup by owners in their properties. With normal property depreciation more than offsetting a homeowner's thin equity margin, substantial potential losses could rapidly be generated in the portfolio during a depression period.

The fact that FHA has had, in the last 25 years, no severe test of the adequacy of its resources and reserve assumptions, does not mean that it can use this experience as a sound basis for insurance operations. In a self-sustaining and nonprofit operation under a mutual mortgage insurance system, conservatism should be the keynote; therefore, provisions must be made to meet the worst possible eventual loss experience.

With rebates for the participating fund balancing off any excess in premiums paid to actual experience, the System can be assured of its ability to be self-sustaining and also fulfill its obligation on a nonprofit basis.

In conclusion, it is noted that Congress has set the insurance premium which may be charged by FHA at not less than one-half of 1 percent nor more than 1 percent per annum on reducing balances. In anticipation of the possibility that at some future date a reduction in mortgage insurance could be justified on an actuarial basis, it might be appropriate at this time to amend the legislation so that the minimum insurance charge which could be made would be one-fourth of 1 percent of reducing balances instead of one-half of 1 percent per annum. It further might be timely to consider extending mutual mortgage insurance benefits to cover loans made under title II, section 213, cooperative housing insurance.

This monograph is respectfully submitted to the Housing Subcommittee of the Senate Committee on Banking and Currency for its study with the hope that the material presented will in some measure contribute to its deliberations on this subject.

APPENDIX

ANALYSIS OF RESERVES OF INSURANCE FUNDS

(23rd Annual Report of the Federal Housing Administration)

The following quotes from this report are limited to the particular phase of operations within the scope of this monograph and are especially significant and germane to the evaluation of the subject involved:

> FHA operates 11 insurance funds under which the fiscal provisions of the several insurance programs are administered. Loan and insurance contracts written under these programs are assigned to a particular insurance fund in accordance with statutory requirements. Each of the funds is credited with fee, premium, and investment income and is charged with administrative expenses and insurance losses with respect to loan and mortgage-insurance contracts assigned to the fund. The earned surplus of a fund, representing the accumulation of net income and the capital contributed by other FHA funds, is available to cover future contingent losses and related expenses. The newer funds, those recently created by amendments to the National Housing Act, have accumulated comparatively little in earned surplus and operate in part from capital contributed by other FHA funds in accordance with statutory provisions. In the other funds, the earned surplus is relatively substantial. Detailed fiscal information on income, expenses, losses, earned surplus, and capital contributions for each FHA fund is given in the section on accounts and finance.
>
> The adequacy of the earned surplus and capital contributions of a fund to cover its future contingent losses and related expenses can be established by a valuation of such future losses and expenses. In the practice of life-insurance organizations such valuations measure reserve liabilities, not only for the purpose of establishing whether a fund is solvent, but also for the purpose of determining how much of earned surplus may be available for distribution to policyholders or stockholders. With mortality experience well established, expected mortality—one of the major elements in the valuation of reserve liabilities—can be predicted reasonably well. Consequently, the reserve liabilities of life organizations can be determined with a fair degree of accuracy and are the expected future liabilities.
>
> There is a noteworthy difference between the reserve liabilities of life organizations and those of FHA's mortgage insurance funds. The future losses and expenses which the liabilities of FHA's mortgage insurance funds measure are principally contingent upon a general deterioration of business conditions—a development which doesn't readily lend itself to prediction. Since the incidence of an economic reversal cannot readily be predicted, the most conservative basis for reserve valuations for such future losses and expenses is to assume that adverse economic conditions of approximately

depression magnitude might develop immediately. The reserve valuations are designed to measure the liabilities resulting from the development of such a contingency. Thus, the liabilities of FHA's mortgage insurance funds are contingent liabilities because the risks which the funds underwrite are economic in nature and cyclical in pattern, and the events insured against do not occur in substantial proportions except under the contingency of a depression. In this sense, FHA's reserve liabilities are not designed to measure the solvency of the funds according to its accepted meaning in the underwriting of conventional risks. To emphasize this distinction, the reserve liabilities of FHA's mortgage insurance funds are described as "estimated reserve requirements." They are thus the amounts of earned surplus which an insurance fund requires to cover the insurance losses and administrative expenses which a fund may incur if an economic reversal of approximately depression magnitude were to develop immediately. Although based on accepted actuarial principles, such valuations of reserve requirements for insurance funds underwriting risks which are predominantly economic in nature are unique in insurance practice.

Another noteworthy feature of the reserve requirements is that they take into account the fact that when a claim under mortgage insurance is paid by an insurance fund, the mortgage insurance fund acquires a property in exchange for its debentures. As properties are sold, the proceeds of sales are used to redeem the fund's debentures. It is the expected future acquisitions and their expected future losses on sale, among other things, that are reflected in the reserve requirements when they are valued with respect to the mortgage insurance contracts in force. Some of the other items which are included in the determination of reserve requirements are expected future premiums, investment income, and administrative expenses.

Only one of the FHA's mortgage insurance funds, the Mutual Mortgage Insurance Fund (the first of the funds to be established and the largest in terms of insurance in force) is authorized by statute to distribute part of its earned surplus to mortgagors upon the termination of mortgage insurance, provided such termination does not involve the payment of an insurance claim. Reserve requirements for this fund are used, as in life insurance practice, to determine how much of surplus may thus be distributed. That part of the earned surplus which is available for distribution is in the statutory account called the Participating Reserve Account. This account is authorized to receive allocations from the net income of the fund which are made in accordance with sound actuarial and accounting practice.

The Mutual Mortgage Insurance Fund, to which FHA's regular home insurance contracts are assigned first attained a balance status with the 1954 valuation when the excess of earned surplus over estimated reserve requirements was a little over $13 million. A balance status for a fund exists when its earned surplus is equal to or greater than the esti-

mated reserve requirements. When a balance status is attained, the fund has sufficient resources to meet such future insurance losses and expenses as might be incurred in the event that adverse economic conditions of approximately depression magnitude were to develop immediately. The progressive improvement in the reserve position of this fund is disclosed by the excess of almost $18 million in earned surplus over estimated reserve requirements in the 1955 valuation and almost $47 million in the 1956 valuation.

The relatively sharp increase in this excess at end of 1956 over 1955 was accountable by differences in the annual increase for surplus and reserve requirements. The comparatively smaller increase in reserve requirements was due in large measure to the relatively lower volume of new insurance written during the calendar year 1956. Other major factors affecting the amount of reserve requirements are terminations of insurance and the aging of the insurance contracts in force. Reserve requirements for such contracts become progressively lower the longer the insurance has remained on the books of the fund. In this connection it may be noted that a substantial increase in the amount of new insurance written has the effect of raising significantly the reserve requirements for the reason that reserve requirements are at their highest level for new insurance. One of the principal purposes served by the excess of surplus over reserve requirements is to protect the reserve position of the fund from a more rapid increase in the volume of new insurance than that for earned surplus. Another purpose served is in the allocations from the net income to the participating reserve account from which participation payments are distributed to eligible mortgagors upon the termination of mortgage insurance. Such allocations will tend to increase relatively so long as favorable economic conditions prevail thereby permitting eligible mortgagors to receive relatively higher termination payments from the account.

TABLE 123.—*Comparative analysis of 15-year premium basis (suggestion 1, p. 345)*

(*a*) At the end of 15 years—balance of mortgage outstanding	$6,846
(*b*) Amount of mortgage insurance premium, ½ of 1 percent, collected by FHA at 15 years with interest, at 2½ percent compounded annually	$783
(*c*) Percentage of $783 to total FHA would have collected on mortgage insurance premium, ½ of 1 percent for 30 years with interest, at 2½ percent compounded annually, $1,498.40 (percent)	52.25

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TABLE 124.—*Comparative analysis of effect on premiums if premiums were discontinued when loan is reduced to 50 percent of original value (suggestion 2, p. 345)*

On property valued originally at $10,350 with a mortgage of $10,000 for 30 years at 5¼ percent:

(*a*) Loan is reduced in 19 years, 10 months (50 percent of value) to $5,175.00

(*b*) Amount of premium FHA has collected at 19 years, 10 months, ½ of 1 percent with interest at 2½ percent compounded annually $1,036.10

(*c*) Percentage of $1,036.10 to total amount FHA would have collected on mortgage insurance premium, ½ of 1 percent, for 30 years with interest at 2½ percent compounded annually, $1,498.40 (percent) 69.14

TABLE 125.—*Comparative effect on premiums based upon 2 percent initial fee and payment of ⅜ of 1 percent per annum on reducing balances (suggestion 3, p. 345)—5¼ percent, 30-year mortgage*

Mortgage insurance premium per $1,000 per year at 23/64 of 1 percent [1]	Annual interest at 2½ percent	Cumulative value of annual premium with interest at 2½ percent	2 percent initial fee with interest at 2½ percent compounded annually	Mortgage insurance premium per $1,000 per year at 23/64 of 1 percent [1]	Annual interest at 2½ percent	Cumulative value of annual premium with interest at 2½ percent	2 percent initial fee with interest at 2½ percent compounded annually
$3.61		$3.61		$2.32	$1.52	$64.62	
$3.56	$0.09	7.26		$2.20	1.62	68.44	
$3.50	.18	10.94		$2.07	1.71	72.22	
$3.45	.27	14.66		$1.93	1.81	75.96	
$3.38	.37	18.41		$1.80	1.90	79.66	
$3.31	.46	22.18		$1.64	1.99	83.29	
$3.25	.55	25.98		$1.48	2.08	86.85	
$3.18	.65	29.81		$1.31	2.17	90.33	
$3.10	.75	33.66		$1.14	2.26	93.73	
$3.02	.84	37.52		$0.95	2.34	97.02	
$2.94	.94	41.40		$0.76	2.43	100.21	
$2.85	1.04	45.29		$0.56	2.51	103.28	
$2.75	1.13	49.17		$0.33	2.58	106.19	
$2.65	1.23	53.05		$0.09	2.63	108.91	$40.93
$2.54	1.33	56.92					
$2.44	1.42	60.78		$68.11	40.80		

Cumulative annual mortage insurance premium on 5¼ percent 30-year mortgage (23/64 of 1 percent) $68.11
Cumulative interest on annual mortgage insurance premium, at 2½ percent 40.80
Initial deposit of 2 percent of principal plus 2½ percent interest (compounded annually) 40.93

Total ..... [2] 149.84

[1] Three-eighths of 1 percent—$0.00375: 23/64 of 1 percent—$0.00361.
[2] Cumulative value of an annual premium of ½ of 1 percent on reducing balances, per $1,000 of mortgage principal, is also $149.84.

TABLE 126.—*5¼ percent, 20-year mortgage*

Mortgage insurance premium per $1,000 per year	Annual interest at 2½ percent on prior year's balance	Cumulative value of annual premium with interest at 2½ percent	Value of single premium with interest at 2½ percent	Mortgage insurance premium per $1,000 per year	Annual interest at 2½ percent on prior year's balance	Cumulative value of annual premium with interest at 2½ percent	Value of single premium with interest at 2½ percent
$4.94		$4.94	$50.15	$2.77	$1.28	$55.28	$65.82
$4.79	$0.12	9.85	51.39	$2.52	1.38	59.18	67.43
$4.63	.25	14.73	52.67	$2.24	1.48	62.90	69.11
$4.46	.37	19.56	53.99	$1.93	1.57	66.40	70.88
$4.29	.49	24.34	55.37	$1.63	1.66	69.69	72.62
$4.10	.61	29.05	56.74	$1.30	1.74	72.73	74.44
$3.91	.73	33.69	58.14	$0.96	1.82	75.51	76.28
$3.70	.84	38.23	59.61	$0.59	1.89	77.99	78.21
$3.50	.96	42.69	61.11	$0.21	1.97	80.17	80.17
$3.26	1.07	47.02	62.63				
$3.03	1.18	51.23	64.19	$58.76			

Col. 1. $58.76 actually paid by mortgagor over life of 20-year 5¼ percent mortgage per $1,000 of principal.
Col. 3. $80.17 cumulative value of the annual premiums plus interest at 2½ percent compounded annually based on the theory premiums are paid at end of each year.
Col. 4. $50.15 value of single premium plus interest at 2½ percent compounded annually would equal col. 3.

TABLE 127.—*5¼ percent, 25-year mortgage*

Mortgage insurance premium per $1,000 per year	Annual interest at 2½ percent on prior year's balance	Cumulative value of annual premium with interest at 2½ percent	Value of single premium with interest at 2½ percent	Mortgage insurance premium per $1,000 per year	Annual interest at 2½ percent on prior year's balance	Cumulative value of annual premium with interest at 2½ percent	Value of single premium with interest at 2½ percent
$4.96		$4.96	$61.81	$2.89	$1.73	$73.66	$87.42
$4.85	$0.12	9.93	63.40	$2.68	1.84	78.18	90.60
$4.75	.25	14.93	65.01	$2.46	1.95	82.59	91.84
$4.73	.37	19.93	66.62	$2.22	2.06	86.87	94.14
$4.51	.50	24.94	68.29	$1.97	2.17	91.01	96.49
$4.38	.62	29.94	70.00	$1.71	2.28	95.00	98.90
$4.25	.75	34.94	71.75	$1.43	2.38	98.81	101.38
$4.11	.87	39.92	73.54	$1.14	2.47	102.42	103.91
$3.97	1.00	44.89	75.38	$0.83	2.56	105.81	106.51
$3.81	1.12	49.82	77.26	$0.51	2.65	108.97	109.17
$3.64	1.25	54.71	79.19	$0.17	2.76	111.90	111.90
$3.47	1.37	59.55	81.17				
$3.29	1.49	64.33	83.20	$75.73			
$3.10	1.61	69.04	85.28				

Col. 1. $75.73 actually paid by mortgagor over life of 25-year 5¼-percent mortgage per $1,000 of principal.
Col. 3. $111.90 cumulative value of the annual premiums plus interest at 2½-percent compounded annually based on the theory that premiums are paid at end of each year.
Col. 4. $61.87 value of single premium plus interest at 2½-percent compounded annually which would equal col. 3.

TABLE 128.—*5¼ percent, 30-year mortgage*

Mortgage insurance premium per $1,000 per year	Annual interest at 2½ percent on prior year's balance	Cumulative value of annual premium with interest at 2½ percent	Value of single premium with interest at 2½ percent	Mortgage insurance premium per $1,000 per year	Annual interest at 2½ percent on prior year's balance	Cumulative value of annual premium with interest at 2½ percent	Value of single premium with interest at 2½ percent
$4.97		$4.97	$73.22	$3.19	$2.09	$88.89	$108.70
$4.90	$0.12	9.99	75.05	$3.02	2.22	94.13	111.41
$4.82	.25	15.06	76.93	$2.85	2.35	99.33	114.20
$4.74	.38	20.18	78.85	$2.66	2.48	104.47	117.05
$4.65	.50	25.33	80.82	$2.47	2.61	109.55	119.98
$4.56	.63	30.52	82.84	$2.26	2.74	114.55	122.98
$4.47	.76	35.75	84.91	$2.04	2.86	119.45	126.06
$4.37	.89	41.01	87.04	$1.80	2.99	124.24	129.21
$4.26	1.03	46.30	89.21	$1.57	3.11	128.92	132.44
$4.16	1.16	51.62	91.44	$1.31	3.22	133.45	135.75
$4.04	1.29	56.95	93.73	$1.04	3.34	137.83	139.14
$3.92	1.42	62.29	96.07	$0.75	3.45	142.03	142.62
$3.79	1.56	67.64	98.47	$0.46	3.55	146.04	146.19
$3.65	1.69	72.98	100.94	$0.13	3.67	149.84	149.84
$3.50	1.82	78.30	103.46				
$3.35	1.96	83.61	106.05	$93.70			

Col. 1. $93.70 actually paid by mortgagor over life of 30-year 5¼-percent mortgage per $1,000 of principal.
Col. 3. $149.84 cumulative value of the annual premiums plus interest at 2½ percent compounded annually based on the theory premiums are paid at end of each year.
Col. 4. $73.22 value of single premium plus interest at 2½ percent compounded annually which would equal col. 3.

PROPOSAL FOR A CENTRAL MORTGAGE RESERVE BANK

THOMAS P. COOGAN, President, Housing Securities, Inc., New York, N. Y.

This memorandum is submitted in response to the following question:

> What new facilities, public or private, should be created to increase and to improve the distribution of the pool of credit available for new residential construction?

The policy of the United States on housing was clearly set forth by Congress in the preamble to the Housing Act of 1949. Unless steps are taken to implement this policy and overcome today's difficulties, this excellent statement remains as empty words. To that end this paper is directed to the general assumption that money is the key to housing. It is necessary to have an adequate supply of money available for long terms, at reasonable rates for mortgage investment. When these conditions prevail, housing moves steadily and smoothly ahead. When money is not available or the rates becomes too high, housing, with its customary lag behind the monetary change, begins to decline. To provide a permanent solution to this situation, the Central Mortgage Bank is proposed.

The last few years have demonstrated that wide fluctuations in the money market make a situation in which a sound housing economy is not possible. While the use of monetary controls in such a vigorous manner is new, all indications are that it is going to continue and instead of being an unusual situation, it must be accepted as customary. Therefore, in addition to the need for tapping new sources of funds for housing finance, means must be provided for some form of insulation to protect and maintain a reasonable supply of mortgage money available at reasonable rates in spite of the need of monetary controls for other purposes.

To complicate matters, there is not only the Federal Reserve Board with its controls, but there are all the other agencies of government reaching into that limited field of investors who buy mortgages. It started with the Wherry Act, whereby FHA was used to insure mortgages on housing that had previously been financed directly by the Treasury. With this opening wedge and the continuing need to stay within a tight Federal debt limitation, the use of insured or guaranteed mortgages by agencies of government instead of direct appropriation steadily increased. Next there were the tanker or ship loan guaranteed by the Maritime Commission, with interest rates and payoffs on more attractive basis than home mortgages. This was followed by the Capehart housing—a successor to the Wherry housing—with an unqualified guaranty from the Defense Department in addition to FHA insurance for a total of $2 billion. Next came the GSA or General Services Administration with mortgages subordinated to Government leases for post offices, customhouses, and other Government uses. Now

mortgages are guaranteed by the CAA for mortgages to feeder airlines, all on an attractive basis to investors.

All these things have invaded that relatively small field of financial institutions who are willing to invest in mortgages. This small field covers those institutions that will take the trouble to do the necessary servicing on a monthly amortized mortgage, with the necessity of handling payments to principal and interest each month; be willing and able to meet the requirements as to doing business in the various States in which the mortgaged properties are located; be agreeable to submitting the State taxes or other supervisory requirements of the many States. In addition, the investor must inspect the properties before buying the loans and must make sure that real estate taxes and insurance premiums are paid and that the property is being maintained. In addition, we have the investor's whimseys regarding size, number of rooms, basements, and garages, all of which should be unimportant in the purchase of insured or guaranteed loans. These are the things that limit the field for mortgages and make the outlook dim for housing volume in the sixties and will nullify today's tremendous urban redevelopment plans.

The mortgage as used by FHA and VA is an excellent instrument for the home buyer. It makes possible the purchase of a home with a low downpayment and long amortization at a reasonable interest rate. For the investor, however, the mortgage is an outmoded instrument and the economy is long past due for a Central Mortgage Reserve Bank to convert these mortgages into notes and debentures attractive to the general investment market. As a matter of fact, the original Housing Act that established FHA provided for private mortgage associations to be created for this purpose. The only one organized was the present FNMA and it is greatly changed from the original concept. Every European country and most South American countries with a housing agency operate with a central mortgage bank of one kind or another. There is the need, the facilities, and the opportunity to set this bank up and overcome the most serious impediment to housing in this country.

The present FNMA has broken the ice and paved the way for a true Central Mortgage Reserve Bank. It is capitalized for $207 million and now has approximately $37 million additional stock issued. It has proved that it can sell notes and debentures in the open market. While its capital is too small for the Central Mortgage Bank, it does have, in its management and liquidation portfolio, $2,250 million worth of mortgages purchased under the old FNMA operation, against which some bonds and debentures are outstanding. This portfolio could be transferred together with its capital setup from FNMA to the new Central Mortgage Bank without asking additional appropriations from the Treasury. This should provide a capital more than adequate as a base upon which to issue notes and debentures. It is proposed that the Central Mortgage Bank be a Government corporation with private ownership of one class of stock as a requirement for doing business with the bank. However, it is the intent in this proposal that the Central Mortgage Bank shall remain a Government corporation operating without cost to the Treasury for the good of the housing industry, but not basically as a corporation for profit.

The outstanding stock of the present FNMA should be exchanged share for share for stock in the Central Mortgage Bank. Only approved mortgagees or supervised lenders should be qualified to deal with the bank, and ownership of a minimum amount of stock should be a necessary requirement. No stock purchase should be involved in the sale of mortgages to the Central Mortgage Bank, and the entire cost of each transaction should be represented by the purchase price. It is recommended that for the initial operation ownership of $10,000 worth of stock would be sufficient. Unlike the Federal Reserve Board or the home-loan bank, where stock ownership varies with the size of the institution because their requirements vary with their size, in dealing with the Central Mortgage Bank the requirements for use may vary inversely with their size. It is desirable to have all institutions dealing in or owning mortgages as stockholders, but the large life insurance companies and banks with large mortgage portfolios would not use the Central Mortgage Bank extensively, except its discount facility (where additional stock might be required). On the other hand, the small mortgagee or bank in remote areas may be in a position for the first time to make FHA and VA financing available to its community, and they are expected to be the principal users. This was demonstrated in the last special assistance fund—program No. 10, which extended to over 1,200 communities. It is therefore hoped to make the stock requirement nominal to secure the widest distribution and after experience on the use of the facility, adjustments can be made. This stock, conveying such a privilege, will have a value in excess of its yield and should maintain a price at or close to par.

The Central Mortgage Bank should be operated by a Board of Governors, not less than 12, appointed by the President and representing the various sections of the country and also the various elements of the housing industry and the public, and such other officers and staff as is necessary to the conduct of the business. The Board shall have the authority to buy all FHA and VA mortgages meeting their requirements as to size, source, and age, at some price under par that will always permit the continuing direct purchases of these mortgages by investment institutions interested in mortgage investment. The price shall, however, be at such a level as to support the market for insured and guaranteed loans on new housing and be consistent with the long-range swings in the rate of interest on investments of competitive quality. The Board shall have the authority to set various prices for various mortgages both as to type and price class with possibly some limitation on the maximum mortgage eligible for purchase. The Board shall be given authority to sell notes and debentures to the Treasury when, in its opinion and with the approval of the President of the United States, it is essential that an additional supply of money be available for support purposes during emergencies when debentures cannot be sold or to cushion changes that might be too sudden. The Board shall have authority to issue such notes and debentures for public sale on such rates and terms as is necessary to provide funds for mortgage purchases.[1] The rates required for the sale of its bonds and debentures in the open market, plus operating

[1] These notes, debentures, and also CMB stock should be made legal investments for all Federal supervised institutions.

costs and such margin as it deems necessary for reserves and fluctuations, shall be used by the Board to establish the going rate on FHA and VA loans. It should be clearly established that interest rate changes on VA and FHA loans should only be made slowly and after a clearly long-range change is evident in the general market. The Board shall also have authority to adjust its buying price of mortgages so that through the combined use of the interest rate, purchase price, and its advance commitment prices, the Central Mortgage Bank can provide a constant market free from sudden major changes.

The Board shall also have the right to issue firm advance commitments at such prices and for such fees as the Board may from time to time establish. The Board shall also have the right to lend money on FHA and VA loans at some price less than their established buying price and at such interest rates and for such periods as the Board may establish. These loans are to be made only with full recourse and for periods not to exceed 1 year, preferably less. The Board may, under instructions from Congress or from the President, administer such special funds for emergency or other uses that may be required by the President or by the Congress for special functions that may be established within the field of housing, but as separate and apart from its general operation.

The intent of the discretionary power fixed in the Board is to make possible a smooth flow of money to provide for an adequate housing industry. Also, not only to provide additional funds for housing in perids when tight monetary control is deemed necessary for the general economy, but also to smooth the major swings in money supply. It shall be the purpose of the Central Mortgage Bank to encourage housing in periods of recession and by control of its buying prices, interest rates and available commitment terms, the Board can move to prevent overbuilding during periods of an easy money supply. It is anticipated that the bonds and notes issued will have a callable feature so that from time to time the Central Mortgage Bank can sell some of its portfolio to other investors as well as funding mortgages through bonds.

To further stabilize the housing industry, the Central Mortgage Bank with its control of interest rates on insured and guaranteed mortgages is presumed to be given considerable authority to advise FHA and VA as to their operations as they affect the mortgage market. Through guidance on the issuance of commitments by FHA and certificates of reasonable value (C. R. V.'s) by VA, it is hoped that the Central Mortgage Bank can coordinate the operation during periods of major money changes. Also, that such defects in valuation or mortgage risk that may arise can be called to the attention of the insuring or guaranteeing agency so that improvements can be made in their field operations. This is intended to prevent the so-called second-guessing by one Government operation over another and make effective the ability of the Central Mortgage Bank to buy without further processing all FHA and VA loans meeting their published requirements.

It is anticipated that by establishing a buying price at some point below par regardless of the established interest rate, the private investors will have first choice for all loans. Thus, the Central Mortgage Bank, under normal conditions, is expected to buy a small por-

tion of the total insured and guaranteed loans. By so doing, it will, however, support the price and maintain a stabilized market. It will prevent the growing practice of investors to play the cyclic swings in mortgage prices. It should also facilitate establishing a firm differential between insured and guaranteed mortgages and those without such protection.

The Central Mortgage Bank would be located in Washington and should have such branches as is necessary for its proper operation. This Government corporation should be free from income tax requirements on its own operations and profits after dividends to stock and establishment of reasonable reserves should be returned to the Treasury. As the bank expands its capital and reserves, it should make provision for reimbursing the Treasury for its initial investment of the liquidation and management portfolio and its preferred stock interest in the present FNMA. The legislation creating the Central Mortgage Bank should provide a reasonable limit of authority to sell its notes and debentures to the Treasury in order that it may preserve an orderly market.

With the Central Mortgage Bank issuing notes and debentures at marketable terms, the general money market for investment will be available for housing. Also the vast sums accumulating in pension funds, trust funds, and other investments will find an investment instrument tailored to their needs. Attempts to sell mortgages directly to these funds have met only trivial success. A few pension funds have allocated token sums for mortgage investment but only as a gesture and not with real interest.

The Central Mortgage Bank with its right to do business in every State, with its pooled operation making it immune to rights of redemption and other various minor problems, with the abolition of many investor fantasies regarding the size and price of the house, the materials of construction, the desirability of one State over another, the real value of FHA insurance or VA guaranty, and their maximum terms, will be available to the home buying public. It will make mortgage funds available to all citizens, whether in large cities or smaller towns, whether their color is white, black, red, or yellow, and regardless of their racial origin.

FACILITIES FOR MORTGAGE CREDIT

JAMES W. ROUSE, Mortgage Banker, Baltimore, Md.

Pursuant to the committee request dated October 2, 1958, I am writing to reply to the following query:

> What new facilities, public or private, should be created to increase and to improve the distribution of the pool of credit available for new residential construction?

First, I feel compelled to point out that I am no expert on money and credit. Any contribution I may make to the committee will derive from my actual operations as a mortgage banker working with builders and home buyers to finance their properties and with institutional investors (life insurance companies, savings banks, pension funds, etc.) to invest their funds in real-estate mortgages. To give you some picture of the background from which I write, highlights on our company follow:

We represent 16 life-insurance companies and 22 savings banks. We participated in the organization of Investors Central Management Corp. through which we have sold and now service mortgages for 3 pension fund trustees. We are now servicing $170 million in mortgages for the companies we represent. This volume is divided as follows:

FHA and VA residential	$59,000,000
FHA rental housing	50,000,000
Conventional: Commercial, rental housing, residential	61,000,000
Total	170,000,000

Our company operates in Baltimore, Washington, D. C., and in smaller cities of Maryland.

Now, to the question: There can be little doubt about the urgency of "increasing and improving the distribution of the pool of credit available for residential financing." The problem, however, is not primarily one of new facilities, but of making the existing facilities work better.

The target of a credit policy, as it relates to housing, should be to assure the maximum flow of long-term savings from all possible sources into housing credit. Facilities and conditions which will foster this result should be supported and those which block such a flow should be resisted.

Housing has suffered from an unnatural diversion, away from housing credit, of important pools of long-term savings. For example:

1. *Pension funds.*—Although the growth of pension funds has been enormous, only a very small percentage of such funds has been invested in residential mortgages. Thus a large pool of long-term savings which historically would have been available for residential financing has been unavailable to the housing field.

There are three principal reasons for the failure of pension funds to invest in residential mortgages.

(*a*) Pension funds, for the most part, are administered by people without previous experience in mortgage financing. The administrators have been drawn almost entirely from the investment banking field. It is simpler to invest in stocks and bonds than in mortgages; less home office staff is required and when the individual funds are small, as most of them are at the outset, there is no pressure to reach out into unfamiliar investment fields.

As the size of the individual funds has increased, in very recent years, there has been increasing interest in real estate credit and in some instances a positive desire to acquire FHA and VA loans.

Resourceful selling by mortgage originators and increased experience with mortgages will revise the attiudes of the pension fund administrators. As soon as a few major funds are investing heavily in residential mortgages others will follow. This aspect of the problem is largely a matter of timing, and to the extent it is the only problem, it soon will be overcome.

(*b*) A more serious practical problem exists among trustees administering pension funds. Their relationship with the funds, and the fees they collect, does not contemplate the assumption of an administrative workload such as is required to acquire and manage a portfolio of residential mortgages. New facilities have been needed to answer this problem. Positive interest on the part of pension fund trustees and the eagerness of mortgage originators to find a way to reach these funds has resulted in several important new facilities being developed during the past 2 years. I am sure the committee is familiar with the operations of Investors Central Management Corp.; the plan of Instil Corp. and other proposals to free the pension fund trustee of the problem of home office mortgage administration. These new facilities are beginning to function. Actually, many millions of dollars have been invested in FHA and VA loans by pension funds trustees over the last 2 years. If other conditions become favorable for investment in FHA and VA loans, the roadblock of home office administrative work and expense, will be broken. Several alternative devices are now available to pension fund administrators.

(*c*) The most serious block to a substantial flow of pension funds into residential mortgages has been the ceiling on interest rates on FHA and VA loans. This has resulted in an erratic availability of residential mortgages at acceptable rates and has prevented the pension funds from developing a substantial flow of money into housing credit.

To illustrate: Investors Central Management Corp. was established in January 1956 by 28 mortgage bankers scattered throughout the country. The sole purpose of this new corporation was to establish a facility which could perform, for pension fund trustees and administrators, the home office administrative functions which are a part of acquiring and managing a portfolio of residential mortgages. The formation of ICM had been preceded by nearly a year of research to determine the best possible technique for bringing pension funds into residential mortgages. Pension fund trustees worked closely with us during this period. Forms and contracts were developed; accounting and management procedures agreed upon and a complete working arrangement was established by which ICM legally and responsibly

relieved the pension fund administrators and trustees of the great bulk of the administrative workload connected with residential mortgage investment. A management contract was executed with the Guaranty Trust Company of New York and the first order for FHA and VA mortgages was issued by the Guaranty Trust.

Then accumulating demands for money throughout the economy and particularly for industrial expansion began to compete more vigorously for the available money supply, bidding up the rates on new public issues and direct placements. But the maximum rates on FHA and VA loans were fixed. They were unable to move with the market. They could not compete with other calls for money. All activity with the pension funds ceased. There were no further orders from the Guaranty Trust at that time and extensive negotiations with other major pension fund trustees were put on ice for what proved to be a period of 8 months.

During this time, incidentally, these same trustees were able to continually increase their investment in nonresidential mortgages and sale-leasebacks because the rates of interest on such investments simply shifted in phase with the money market.

By January 1958 the demand for money had slackened and rates had declined to a point at which FHA and VA loans were acceptable once again. Negotiations with pension fund trustees were resumed and ICM completed management agreements with Bankers Trust Co. and J. P. Morgan & Co., Inc. In the following 9 months ICM received commitments from these trustees to purchase FHA and VA mortgages totaling approximately $25 million. The flow of pension funds into residential financing was really underway. Then in September the money market turned again. Once more the fixed VA and FHA rates became uncompetitive in comparison with other available investments and the flow of money from pension funds into residential mortgages has declined to a mere fraction of the flow that had been developed.

2. *Individual investors.*—These constituted an important source of housing credit prior to the depression. The long-term, monthly payment mortgages of post depression years have been poorly adapted to the investment aspirations of individuals. The small monthly return of principal cannot readily be reinvested. Furthermore, FHA regulations prevent an individual from holding an FHA mortgage. Perhaps the tremendous growth of the savings and loan associations is partially accounted for by these types of funds. To the extent that this is true, individual funds are finding their way into housing credit. Perhaps also the FNMA debentures are reaching some of these individuals. However, it has always seemed to me that there should be some simpler and more direct machinery by which debentures could be issued against the collateral of one or more FHA mortgages and sold to individuals and other investors who would accept real estate credit but did not want the burden of administering individual mortgage loans. There are some experimental procedures under examination in this field. It is well worth the committee's attention to explore the development of effective machinery in this area.

3. Most insurance companies and many savings banks are unwilling to buy mortgages at deep discounts even if they are available. There is something unreal and repelling about extreme discounts. Although changes in the money market may cause bonds to be traded at substantial premiums or discounts, it is unorthodox, to say the least, to originate an investment at a far from marketable interest rate and to achieve a competitive yield only by selling the investment at a deep discount. In the housing field, the discount method is particularly cumbersome. Borrowers, for the most part, are individual homeowners. Builders and mortgage originators represent tens of thousands of relatively small-business enterprises. It is not always clear and certain to the institutional investor just who is absorbing the discount. The deep discount is not always simply the reciprocal of fixed interest rate with the borrower paying the same price for his money but paying for it differently. There is always the possibility that someone is getting hurt or does not fully understand the transaction.

The insurance companies and savings banks are accustomed to adjusting interest rates on new conventional mortgages with changes in the money market. As supply and demand factors in the money market have moved rates up and down, mortgage rates, on conventional loans, have shifted with the market. On some occasions individual companies have become "overcommitted" and have temporarily had no money available for investment in either bonds or mortgages. These have been individual situations, however, and have always been short-lived. Throughout the so called "tight money" market, the volume of conventional mortgage commitments obtained by my company from insurance companies steadily increased. As a matter of fact, the ceiling on FHA and VA interest rates has had the effect of increasing the supply of money available for other forms of real estate financing such as office buildings, industrial buildings, apartment houses, retail stores, and shopping centers. To illustrate the free movement of interest rates in nonresidential financing, I am setting forth below a list of mortgages, the loan amounts and interest rates. It so happens that my company has been particularly active in financing shopping centers. For purposes of comparison, I have listed all the loans of this type which we have made. They cover a period of more than 10 years. Some minor variations in rate are attributable to differences in the quality of loans, but for the most part, the loans conform to comparable underwriting standards. In our opinion, in this company, they are all very sound investments. Home office expenses are much less than in residential financing and the correspondents servicing charge will average less than half of the charge on residential mortgages. The net yield to the investor will vary from about 3½ percent to about 5½ percent over this group of loans. The important point is that the ability to move the interest rate with the money market has kept a steady flow of money available to us for this type mortgage investment whereas the ceiling on FHA and VA interest rates has blocked the flow

of insurance company and savings bank funds into residential mortgages. The list follows:

TABLE 129.—*List of mortgage loans and interest rates for nonresidential financing*

Date of commitment	Location	Loan amount	Interest rates
			Percent
Dec. 9, 1944	Arlington, Va	$1,740,000	4
Dec. 31, 1947	Baltimore, Md	4400,00	4
July 24, 1950	Falls Church, Va	250,000	4½
July 28, 1950	College Park, Md	1,250,000	4
Feb. 13, 1952	Dundalk, Md	700,000	4
Aug. 13, 1952	Baltimore County	350,000	4½
Oct. 29, 1953	do	250,000	5
Nov. 27, 1953	Warwick, Va	400,000	4¾
Feb 12, 1954	Baltimore County	220,000	4¾
Mar. 26, 1954	Essex	1,000,000	4¾
Apr. 6, 1954	Canton, Ohio	1,200,000	4¾
May 28, 1954	Omaha, Nebr	2,100,000	4¾
June 15, 1954	Baltimore County	1,050,000	4¾
Aug. 26, 1954	Baltimore, Md	425,000	4¾
Sept. 24, 1954	Baltimore County	6,000,000	4½
Mar. 3, 1955	Wilmington, N. C	575,000	4¾
Mar. 18, 1955	Baltimore, Md	6,000,000	4½
Jan. 16, 1956	Laurel, Md	1,800,000	4¾
Sept. 5, 1956	Baltimore, Md	500,000	5
Feb. 11, 1957	Rockville, Md	2,250,000	5½
Mar. 4, 1957	Arbutus, Md	780,000	5¼
July 8, 1957	Easton, Md	726,000	5½
July 18, 1957	Rockville, Md	2,450,000	5¾
Dec. 2, 1957	Glen Burnie, Md	4,700,000	6
Feb. 21, 1958	Baltimore, Md	650,000	6
Aug. 28, 1958	San Antonio, Tex	2,850,000	5½

If the members of the Senate committee sat "on the firing line" making loans to individual borrowers and dealing with institutional investors—there would be no doubt in your minds that the most serious block to a full flow of money into residential construction is the ceiling on FHA and VA interest rates; that the most important step which can be taken to "increase and to improve the distribution of the pool of credit available for new residential construction" is to lift this ceiling and let residential financing compete with other forms of credit.

The interest rate ceiling has a multiplying effect which exaggerates the shortage in residential mortgage money. As the ceiling operates to block out of the market one source of potential funds, such as the pension funds, it enlarges the shortage of investment money available to residential financing in relationship to the demand for such funds. This deepens the discounts and drives other institutional investors out of the field. This further exaggerates the shortage of money available for residential mortgages; further distorts the supply and demand factors and further increases the discounts. Thus the interest rate ceiling has the reverse effect of that intended. It results in increasing the end cost of residential financing. One alternative, which has been tried before and will always fail, is to also put a ceiling on discounts. This simply results in shutting off the flow of funds altogether.

Nearly all long-term savings are in the hands of nonprofit corporations (mutual savings banks, life insurance companies, pension funds, and savings and loan associations). These savings are administered by trustees for their depositors, policyholders and beneficiaries. It is the responsibility of these trustees to invest the funds under their jurisdiction in such a manner as to produce the best possible return

with acceptable risk. It would be irresponsible for them to invest in any particular form of investment at a return less than is available in other comparable risks. Therefore, when the interest ceiling makes the return on FHA and VA mortgages unacceptable in comparison with other investment opportunities, the management trustee has no choice but to withdraw from the FHA–VA market.

In summary:

1. New private facilities have been required to meet the special problems of the pension funds. Such facilities are coming into being as the result of the natural pressures operating in the market. Only time and a marketable interest rate are required to produce a strong flow of funds from the pension funds into residential mortgages.

2. Some new vehicles may be desirable for attracting funds of individuals into long-term monthly payment mortgages. A simple method for issuing debentures against the collateral of FHA and VA loans might be the answer.

By far the most important new "facility" is not a "facility" at all but a new condition, that is, make the interest rate on FHA and VA loans freely competitive with other forms of investment. Let it move in the market without restriction so that abnormal blocks and distortions do not occur.

I appreciate the opportunity to share in the committee's deliberations and I will be glad to supply any additional information which the committee would consider helpful.

HOUSING CREDIT FOR MIDDLE-INCOME FAMILIES

WILLIAM L. C. WHEATON, Director, Institute for Urban Studies, University of Pennsylvania, Philadelphia, Pa.

This paper was prepared in response to the following question:

> What should be done to provide a source of housing credit adequate to meet the needs of urban families who are potential purchasers or renters of privately owned standard housing but whose incomes are not high enough to permit their participation in existing markets for such housing?

WHO ARE THE MIDDLE-INCOME FAMILIES?

Middle-income families are defined, for housing purposes, as consisting of those families whose incomes are too high to permit them to be housed in public housing projects and too low to be able to afford new privately built housing. The term "middle-income families" may be misleading for these purposes because most American families, including those in the bottom third and even the top tenth of our income distribution, think of themselves as middle class and middle income. The former group, those in the bottom third of the income distribution, assuredly need substantial financial assistance to obtain decent housing. Those at the top of the income scale need none.

Much of the confusion in legislative discussion regarding housing aids in recent years stems from the lack of preciseness of the definition of this term. This vagueness in terms is intensified by regional differences in income and building cost. Average family incomes are higher in northern areas than they are in southern regions. They are substantially higher in metropolitan centers, North and South, than they are in rural nonfarm and farm areas. As a consequence, national statistics tend to be quite deceptive when used in housing market discussions.

For housing purposes, it is essential that the incomes in each housing market be compared with the housing costs in that housting market. The economical homes being built in Los Angeles' meropolitan area cannot be purchased by New York families of middle income, even though the incomes of such families may be quite sufficient for such purchases. The fact is that an acceptable home can be produced in Los Angeles for far less than the cost of a comparable facility in New York City. Similarly, although quite economical homes may be produced in small towns and villages in rural Illinois, these are not available to families living and working in central Chicago.

An illustrative comparison of family incomes and housing costs is presented by tables 130 and 131, which show the income distribution of Philadelphia families in a recent national housing inventory, and the comparable monthly housing costs of a new home in that housing market. The tables indicate that 64 percent of all Philadelphia fam-

ilies have incomes below the level required by prudent mortgage lenders to purchase these new homes. These tables are based upon the assumption that families will be willing to spend 20 percent of their income for housing. In fact, Philadelphia families and other families in the United States spend something nearer 15 percent of their income for housing. If this ratio were to be used, only 10 percent of Philadelphia families have incomes which would enable them to purchase new homes in that area.

These general relationships appear to exist in most housing markets in the country. In some cities, especially in the South where construction, land, utility, and public service costs are exceptionally low and where incomes are above regional averages, half or slightly more than half of the population may have economic access to the housing market in fact. Unfortunately, the local studies required to establish the relationship systematically have never been conducted. FHA market analysis studies which are confidential and not published, seem to support the general conclusion drawn above.

TABLE 130.—*Family income distribution, Philadelphia metropolitan area, December 1956*

Income class	Percent	Percent
Under $2,000	12	32
$2,000 to $3,999	20	
$4,000 to $4,999	17	32
$5,000 to $5,999	15	
$6,000 to $6,999	10	36
$7,000 to $7,999	8	
$8,000 to $9,999	8	
$10,000 and over	10	
Total	100	100

Source: National Housing Inventory.

TABLE 131.—*Family income distribution and ability to purchase a home, Philadelphia, December 1956*

Income group	Percent of families	Maximum monthly housing payment [1]	House price required [2]	Normal housing payment
Under $4,000	32	Under $66	About $6,000. None produced	$50.
$4,000 to $5,999	32	$66 to $100	$6,000–$10,000. None produced	$50 to $75.
$6,000 and over	36	$100 and over	$10,000 and up [3]	$75 and up.
Total	100			

[1] Assuming 20 percent of income for monthly payment.
[2] With normal downpayment and financing.
[3] The lowest priced new home in the Philadelphia metropolitan area in 1956. Only 3 percent of new dwellings were at this price level; 20 percent were priced at $10,000–$12,000, 77 percent were priced over $12,000. The 1957 average price was over $15,000. Only 10 percent of Philadelphia families can afford these homes at the average ratio of income to housing expense (15 percent) characteristic of such families.

Source: Institute for Urban Studies.

Finally, it should be noted that analyses of the distribution of incomes of families who have purchased new homes or rented newly built apartments reveal that significant proportions of these home purchases are made by families who are required to spend substantially more than the accepted norm of 20 percent of income for housing expenses. A detailed analysis of the characteristics of these purchases has never been done. Doubtless, many of the purchasers have

special characteristics. They may be retired couples with large capital assets and low current incomes; families temporarily in a low-income group, but with very high future income prospects; or families in the middle-income group, but with very large downpayments resulting from inheritances, capital gains, and the like. Since a very large proportion of new-home purchasers in recent years have been previous homeowners, it may be presumed that the housing market has been strongly supported in these years by capital gains of owners who purchased homes prior to the war and postwar inflation. Thus, acute and rapid inflation in earlier years could account for several million purchasers who are able to purchase a home at higher cost than their incomes would otherwise permit. The number of such families will be of proportionately less significance in the future, unless inflation resumes the breakneck pace of the early postwar years.

Middle-income families may include large numbers of families which do not consist of a husband, wife, and children. Higher income families include a significant number of families with two workers. Middle-income families may include unusually large portions of single persons who maintain an independent household, husband-wife families, particularly those who are newly married and embarking on both employment and marriage careers, aged couples, and the retired. Thus, meeting the housing requirements of middle-income families involves consideration not only of the sales of single detached homes, but also rental housing for the young and the aged and for single persons and couples.

The relocation of hundreds of thousands of families as a result of programs of urban renewal, highway building, and other public works will generate particularly acute needs for new housing of middle-income families. Probably any middle-income program should give the first preference to relocatees. Indeed, their needs will probably require a considerable share of any future middle-income housing program.

THE ROLE OF MIDDLE-INCOME HOUSING IN THE NATIONAL ECONOMY

The successes and failures of the housing industry in meeting the needs of middle-income families are closely linked with the very wide fluctuations in residential construction volume, an important element in economic stability. Residential building booms are probably largely generated by a surge of home purchases on the part of millions of families who come into the market in years of economic optimism. Some of these families are doubtless fortunate beneficiaries of momentarily favorable relationships between building costs, housing prices, and family incomes. Many returning GI's who bought $6,000 and $7,000 homes in 1946–47, before the worst increases in construction cost occurred, might not have been able to buy the same home 3 years later when similar homes were priced at $10,000, or more. Other middle-income families in periods of boom may overextend themselves because of optimistic feelings regarding their future incomes. If their hopes are realized, the purchase subsequently becomes a sound one. But, as the experience of 1929–33 indicates, overoptimism may also be a harbinger of disaster.

The inability of the building industry to market homes to a majority of American families is also responsible for the continuing shortages of housing which require that old substandard units be kept in use. Substandard and obsolete homes cannot be retired from use and indeed do not depreciate in value because over any period of 10 or 20 years, the volume of new residential construction is too low to force them off the market. As a result, the whole process of filtration, which works effectively in automobile markets, almost wholly fails to operate in the housing market. Indeed, over the last 20 years there has been more upward filtration than downward filtration. Few homes have depreciated in value and most, even of the worst condition and location, have appreciated value.

A major issue facing the housing economy, therefore, is the extent to which filtration can be induced by positive credit policy. If the home-building industry can be enabled to serve an additional 25 percent of the population, it could presumably produce an additional 200,000 to 500,000 new homes per year. This additional residential construction would slowly force older homes to depreciate in value, thus making them available to families in the low-middle-and low-income groups, or force their retirement from the market. The housing market might then serve a larger proportion of the total population, providing them with adequate homes in contrast to the present situation in which at least one-fourth of the population is forced to live in substandard or obsolete homes.

Such a policy of induced filtration would also make it possible for urban renewal programs to operate in many areas profitably, where they cannot so operate today. Induced filtration by driving down the prices of old structures would bring them to price levels which might render their purchase and rehabilitation profitable. Under present circumstances, the high prices demanded and obtained for old homes makes rehabilitation economically profitable only for a luxury or upper-income market. Finally, induced filtration is essential to create the vacancies needed in the housing supply to permit the quick and humane relocation of families displaced by urban renewal and other programs. As long as vacancy rates remain exceedingly low, particularly among good older homes, the scope of renewal efforts will be restricted by relocation problems.

ALTERNATIVE MEANS FOR EXPANDING THE HOUSING MARKET

Any attempt to expand the housing market to serve middle-income families must draw upon several alternative means of reducing the cost of new housing. These include reductions in local taxes and reductions in cost of financing. Some of these areas for cost reduction are more accessible to public control than others. No one of them can bring costs within the means of all families. Indeed, maximum use of all available means could not achieve this end. The capital cost of new homes is composed of three major elements: construction costs, land costs, and profits, which together produce price to the consumer.

Construction costs

Attempts to reduce construction and land costs during periods of high demand serve merely to increase profits. During periods of low demand and intense competition, however, construction-cost and land-cost reductions may make possible benefits to the consumer rather than merely the builder. Federal credit programs do not provide any ready method of reducing construction costs. Indeed, Federal credit programs, by setting minimum construction standards above those prevailing in the industry, may have sometimes increased construction costs. Probably the strongest weapon that Federal credit programs have for reducing construction costs are those steps which would increase competition in the building industry, and Federal-aided research programs. Research could bring to bear on the builder's problems the extensive knowledge now available in many research laboratories and not now focused on those problems. A combination of a substantially enlarged research program and credit aids which would produce a high sustained volume of new home building, would probably maximize construction cost reductions better than any more direct method.

Land costs

Land costs have been rising rapidly in recent years and indeed have shifted from as little as 10 percent of total capital cost to as much as 20 percent within the last 5 years. The rise in land prices may have been occasioned in part by speculative holding induced by the building boom.

It has been unquestionably intensified by market tendencies toward ever larger lot sizes which now commonly require several times the acreage per hundred houses required even a decade ago. Finally, land costs are rising sharply and will continue to rise as a result of the utility and community service requirements of excessive lot sizes. Streets, sewers, schools, water and all other community facilities increase in cost as densities decline.

A rapid acceleration in urban expressway building would doubtless help to abate the intense competition for choice building sites which now exists. The present interstate highway program is quite inadequate to meet these needs. A program of twice the present total of State, Federal and local expressway planning will be required to serve the population and automobile ownership expansion of the next 15 years. The sooner such a program is launched, the better from the standpoint of land prices.

A national campaign to examine the effects of excessively low density residential building, and to put a higher price on Federal aid to housing development at such densities would contribute substantially to reducing land prices and land-development costs. Families who desire 1-acre lots and can afford to pay for them, should surely be permitted to do so, but it is questionable whether the Federal aids should be available to residential developments which have such a self-defeating character, which produce inflated prices in land and higher costs to local communities.

There is an urgent need for additional public steps to make land available at reasonable cost for home building. The Housing Act of 1949 authorized Federal loans (but not Federal grants) for the

acquisition of open land "necessary for community development." These powers have never been used, although a few projects have been proposed which would make large tracts of semivacant land available for new development at prices substantially below those which home builders could otherwise obtain. In other countries, notably Britain and the Scandinavian countries, municipal governments have assembled large tracts of land which, after planning and the installation of community facilities, are sold to developers. The city of Milwaukee proposed such a program during the postwar years, but failed to obtain State legislative approval for it. The Federal Government should certainly give the maximum possible encouragement to States and cities desiring to embark on such suburban land assembly programs on an experimental basis. There is reason to believe that during the next 15 years, when American suburbs must accommodate an addition 60 million persons resulting from our rapid population growth, such programs of community land assembly will be essential to provide the building industry with sites for new home building at fair prices.

Profits

In times of acute housing shortage, profits in the home-building industry have been exceedingly large. As conditions become more competitive it is believed that profit margins dwindle and the less efficient producers drop out. Attempts to regulate profits in a competitive system are probably never very efficient and may serve as much to deter action as they serve to reduce costs. For these reasons, the Government should seek to achieve profit reduction by encouraging competition in many ways.

The administrative methods for selecting developments which would benefit from low interest Government loans are in themselves an attempt to assure that the most competitive developers benefit from such a program. To the extent that preferential mortgage loan terms available to private builders can also be made available on effectively similar terms to cooperative and nonprofit corporations, their operations will help to provide a yardstick and price competition for private developers. Although the quantity of cooperative and nonprofit housing built may be small at any time, governments should make sure that loans are available to such corporations on preferential terms at all times. If they prove to be somewhat less efficient than private developers, the public will nevertheless be served by the existence of cooperative developments. If cooperatives prove to be as efficient as other private developers and pass on savings otherwise retained as profits to consumers, their competitive pressure will help to prevent egregious profiteering.

Operating costs

Operating costs are almost as large an element in the total cost of housing as capital costs. They include the cost of heat, water, light, insurance, maintenance, and repair and replacement. Some of these costs are directly affected by the quality of construction. Higher construction quality tends to reduce operating and maintenance costs. The major variable of these costs, however, is the degree of responsibility assumed by the occupant. In rental housing, the occupant is presumed to be less careful in his use of the structure, and therefore

occasions more frequent redecoration or repair. Where homes are owned individually or cooperatively, it is presumed that the occupant exercises greater care in the use of property belonging to him.

The operator of rental housing almost invariably must pay high wages and certain overhead costs for maintenance and repair work. The owner of an individual or cooperative home usually does it himself at no wage cost. As a consequence, the replacement of a broken window which will cost an apartment housing operator $2 or $3, will usually cost a homeowner only his time plus 30 or 40 cents for material. For these reasons, it is widely believed that despite certain inefficiencies, the operating costs of individually or cooperatively owned homes will be far lower than those on rented accommodations. In testimony, in 1950, on S. 2246 the Housing Administrator indicated that the savings might amount to 10 percent or more of the total monthly housing costs.

These observations strongly suggest that it would be advantageous where possible, to seek to provide housing for middle-income families through programs of home ownership and cooperative housing, recognizing that many types of middle-income families must be served by rental housing if even at higher costs.

Property and other taxes

Taxes are widely varying components in housing cost. Local property taxes may be as low as 10 percent or as high as 30 percent of total monthly costs. Rates of 20 to 25 percent seem common and situations in the lower end of the scale are indicative either of very low levels of local government services or of situations (common in new residential development) where municipal costs may be expected to mount rapidly. Often, new residential developments in suburban areas are sold on the basis of artificially low-tax rates which do not support schools and other municipal services required by such developments. In these suburbs, it is not uncommon to find local tax rates doubling or quadrupling over a period of 10 years following development.

A Federal housing policy which would jeopardize the local provision of municipal services for housing would be self-defeating. Such services are essential for housing and they are largely dependent upon the property tax. On the other hand, it should be recognized that many local communities grant tax exemption or abatements for many forms of housing where the need served is locally regarded as particularly urgent. Almost all communities thus grant tax abatements for low-income public housing. Many communities, in addition, give tax abatements to middle and even upper income housing in redevelopment areas. In the latter case, the economic need for such tax concession must be questioned.

There is a growing recognition that the property tax is no longer a very good measure of wealth, and is proportionally declining as a tax source in our industrial economy. The dependence of local governments upon the property tax is a major cause of the inability of local governments to meet urgent needs for schools, highways, health, and other essential local services. To the extent that State governments and the Federal Government with their broader powers of taxation can assume responsibility for financing three major services—

education, highways, and welfare—local governments may be able to provide the host of less important and less expensive services adequately from property tax revenues. Thus, Federal and State programs of aid to these three objectives of local expenditures should be encouraged as means of reducing housing costs and widening the market for middle-income housing. Traditional canons of public finance support the view that these services should be financed from tax revenues derived from other than property taxes.

Because of the existence of heavy discrimination in favor of home ownership written into Federal income-tax law, the nonproperty tax burdens of individually owned homes and cooperatively owned homes are far less than those on rental housing. So long as this condition persists, owner occupancy will have income-tax advantages over other forms of tenure. These advantages are of relatively limited benefit to middle-income families who widely use standard, rather than itemized, income-tax deductions. Nevertheless, some families in middle-income classes may find it advantageous to itemize deductions and thus take advantage of the preferential treatment given by Federal income tax to homeowners.

Financing costs

Financing costs are the second largest and sometimes the largest single component in housing costs. Table 132 reveals the total financing costs over various amortization periods. The table indicates that the cost of interest on ultra-long-term amortized mortgages may often exceed the cost of the house. Where families purchase homes on amortized mortgages of more than 30 years' term, they will usually be paying $20,000 or more for a $10,000 house. The extension of amortized periods is popular because it reduces monthly costs even though it increases total costs over the long run.

TABLE 132.—*Total payments per thousand dollars over life of loan for various interest rates and amortization periods*

Interest rates	10 years	20 years	30 years	40 years
6 percent	$1,333.20	$1,720.80	$2,160.00	$2,640.00
5 percent	1,273.20	1,584.00	1,933.20	2,313.60
4 percent	1,214.40	1,454.40	1,717.20	2,006.40
3 percent	1,159.20	1,332.00	1,519.20	1,718.40
2 percent	1,104.00	1,214.40	1,332.00	1,454.40

The Federal policy has been directed largely toward the reduction of downpayment requirements and monthly costs simply because these are cost items most amenable to Federal influence. In facing the problems of widening the market for middle-income families, this continues to be the case, and further use of these powers is a major means available to meet the needs of relocated families and others in the middle-income group now unable to purchase or rent new homes. As will be suggested later, any such program must be supplemented with other cost-reducing measures if it is to succeed.

Table 133 shows the effect upon total monthly housing expenses of various amortization periods and interest rates with varying downpayments. The table utilizes construction and operating costs in typical low-cost, middle-cost, and high-cost cities to illustrate the total monthly costs facing prospective purchasers in these different types of areas. The table is based upon interest rates which prevailed during the recent building boom. Currently higher rates would of course produce somewhat higher costs.

The table reveals that monthly costs for a $10,000 house range from $99 to $77 a month under various terms now authorized, depending on downpayment. It also reveals that these costs might be reduced to a range of from $72 a month to $56 a month by changes in the interest rate below the market rates and running as low as 1 percent. In average-cost areas, the comparable costs are $68 to $48 per month and in low-cost areas from $56 to $39 a month. Table 134 shows the income groups which would be served by the same financing plans. It reveals that the presently authorized interest rates and amortization periods serve only families in the upper income groups, and that progressive reductions in interest rate for the longest economically feasible amortization period would bring monthly housing costs well within the reach of families of median income. In some cases the most favorable terms would enable families at the top of the lowest income third of the population to purchase new homes.

TABLE 133.—*Estimated total monthly housing expense under various financing terms*

IN TYPICAL NORTHERN CITIES WITH HIGH COSTS

Sales price and downpayment	Total monthly housing expense under—						
	Typical 1956 Federal financing aids			Financing terms required for middle-income families			
	FHA 4½+½ percent 20-year (1)	FHA 4½+½ percent 30-year (2)	FNMA 4½+½ percent 40-year (3)	3½ percent 40-year (4)	2½ percent 40-year (5)	1½ percent 40-year (6)	1 percent 40-year (7)
$10,000 3-bedroom home:							
No downpayment	$99	$87	$82	$72	$67	$61	$59
5 percent down	96	85	79	70	65	60	58
10 percent down	93	82	77	68	63	59	56
$9,000 2-bedroom home:							
No downpayment	90	79	74	65	61	57	54
5 percent down	87	76	72	64	60	55	53
10 percent down	84	74	69	62	58	54	52
IN AVERAGE-COST AREAS							
$10,000 3-bedroom home:							
No downpayment	$95	$83	$78	$68	$63	$57	$55
5 percent down	92	81	75	66	61	56	54
10 percent down	89	78	73	64	59	55	52
$9,000 2-bedroom home:							
No downpayment	86	75	70	61	57	53	50
5 percent down	83	72	68	60	56	51	49
10 percent down	80	70	65	58	54	50	48
IN LOW-COST AREAS							
$8,000 3-bedroom home:							
No downpayment	$78	$68	$64	$56	$51	$47	$45
5 percent down	75	66	62	54	50	46	44
10 percent down	73	64	60	53	49	45	43
$7,000 2-bedroom home:							
No downpayment	69	61	57	50	46	43	41
5 percent down	67	59	55	49	45	42	40
10 percent down	65	57	54	48	44	41	39

NOTES

Cost estimates: All cost data are FHA estimates for new homes built under sec. 203 and insured in 1952. Operating expenses, taxes, and insurance are as follows for the several price classes: $10,000–$18.80, $9.20, $1.50; $9,000—$17.93, $8.43, $1.24; $8,000—$16.75, $7.10, $1.15; $7,000—$15.77, $6.41, $1.02. Cf. HHFA, 6th Annual Report, p. 280, table 27. In all cases costs used are for value class below price shown to allow for difference between FHA value and market price.

Northern cities: FHA cost data are national averages. They therefore understate heat and utility costs in northern cities. $4 have been added to FHA estimates to cover this difference in northern cities.

Average cost areas: FHA cost data.

Low cost areas: FHA cost data for $8,000 and $7,000 homes probably represent cases occurring almost exclusively in southern areas and in smaller towns in such areas. Available data do not reveal major cities in which $7,000 homes are currently being marketed in significant quantities.

Single homes: All data are for single homes sold for owner-occupancy.

Rental housing: Structures of similar floor area built for rent in typical rental housing projects would probably rent for $4 to $8 per month more than the figures shown. This cost difference would arise from higher maintenance materials, fuel, and utilities.

Financing terms:

(1) Conventional FHA-insured, 20-year loan. The insurance charge is approximate.

(2) FHA-insured 30-year mortgage at 4¼ percent plus insurance as proposed in pending legislation.

(3) FNMA-made, FHA-insured 40-year loan at 4½ percent plus insurance. This rate is below current rates on sec. 220–221 loans.

(4) A 3½-percent 40-year level payment loan.

(5) A 2½-percent 40-year level payment loan.

(6) A 1½-percent 40-year level payment loan.

(7) A 1-percent 40-year level payment loan.

Other alternative financing arrangements have been considered from time to time. One proposal would eliminate the amortization of the mortgage or spread amortization periods over 100 years. In

view of the rapidly changing character of American cities historically and in the foreseeable future, such a policy would be exceedingly risky and would defer recognition of the public costs involved for many years. A second plan, used in some European countries, provides a very low interest rate public second mortgage loan for half of the amount borrowed, with a conventional private loan for the other half. The combination of public interest rates on half of the loan (commonly 2½ percent in European examples), and private interest rates (5½ percent today) produces substantially higher monthly charges than those achievable with a direct public loan on the whole amount of the mortgage.

There have also been proposals for second mortgages made by public agencies which would not carry interest or amortization charges until after repayment of a privately made long-term 50-percent mortgage. The charges here are lower than those described above for wholly public mortgage loans at lower than market rates, but the costs to the public would also be very large and would have to be met immediately. They would also involve very large deferred risk taking. Thus, any systematic review of potential financial tools indicates that tool which would most nearly serve the needs of the middle-income families and which would, at the same time, minimize public costs and risk taking, would be a long amortization period, publicly made mortgage loan, bearing an interest rate at varying levels below the market rate, but at or above the cost of short-term money to the Government.

TABLE 134.—*Income groups served by various financing plans*[1]

IN NORTHERN CITIES

	$10,000, 3-bedroom house	$9,000, 2-bedroom house
1 percent, 40 years	$3,350 to $3,500	$3,100 to $2,250.
1½ percent, 40 years	$3,500 to $3,800	$3,250 to $3,500.
2½ percent, 40 years	$3,800 to $4,100	$3,500 to $3,700.
3½ percent, 40 years	$4,100 to $4,600	$3,700 to $4,100.
4½ plus ½ percent, 40 years	$4,600 to $5,000	$4,100 to $4,400.
4½ plus ½ percent, 30 years	$5,000 to $5,600	$4,400 to $5,000.
4½ plus ½ percent, 20 years	$5,600 and up	$5,000 and up.

IN AVERAGE COST CITIES

1 percent, 40 years	$3,100 to $3,300	$2,850 to $3,000.
1½ percent, 40 years	$3,300 to $3,500	$3,000 to $3,200.
2½ percent, 40 years	$3,500 to $3,800	$3,200 to $3,500.
3½ percent, 40 years	$3,800 to $4,400	$3,500 to $3,900.
4½ plus ½ percent, 40 years	$4,400 to $4,700	$3,900 to $4,200
4½ plus ½ percent, 30 years	$4,700 to $5,300	$4,200 to $4,800.
4½ plus ½ percent, 20 years	$5,300 and up	$4,800 and up.

IN LOW COST CITIES

	$8,000, 3-bedroom house	$7,000, 2-bedroom house
1 percent, 40 years	$2,600 to $2,700	$2,350 to $2,450.
1½ percent, 40 years	$2,700 to $2,900	$2,450 to $2,600.
2½ percent, 40 years	$2,900 to $3,200	$2,600 to $2,900.
3½ percent, 40 years	$3,200 to $3,600	$2,900 to $3,200.
4½ plus ½ percent, 40 years	$3,600 to $3,900	$3,200 to $3,400.
4½ plus ½ percent, 30 years	$3,900 to $4,400	$3,400 to $3,900.
4½ plus ½ percent, 20 years	$4,400 and up	$3,900 and up.

[1] Assuming 20 percent of income for housing expense. This rate is above current market experience.

Source: Table 133.

CRITERIA FOR A MIDDLE INCOME HOUSING PROGRAM

In the light of the preceding discussion, we might establish several criteria which any middle income housing program should fulfill. Some of these are enumerated below.

1) A middle income housing program should serve families in income groups which cannot afford new private housing under present sales and rental market conditions. The administrative and financial arrangements governing such a program should provide reasonable certainty that the beneficiaries will not be families who can afford new housing under existing financial arrangements. Such safeguards should assure that the program will not merely reduce conventionally financed rental or sales housing construction. By the same token, these arrangements must be such as to assure that the beneficiaries in fact need more generous public assistance than present aids provide.

(2) Presumably, preference should be given also to families being relocated by renewal and other public improvement programs or to families who now live in substandard or overcrowded homes.

(3) Federal credit aids extended to middle income families should not interfere with or supplant the existing flow of savings to private lending institutions and mortgage lending. A program which competes with the mortgage-lending activities of private lenders would merely substitute public credit for private credit without increasing the supply of housing or the number of consumers served by the market. Administrative and financial arrangements should be such as to provide reasonable certainty that Federal credit will not be substituted for private credit.

(4) To the extent possible, a middle income housing program should use existing public and private mortgage lending institutions and building organizations as reasonably efficient means for administering programs of aid to housing. Unless demonstrably necessary, additional public agencies, either Federal or local, should not be established to administer such a program where existing agencies can be used for these purposes.

(5) The program should produce sufficiently decisive reductions in the monthly cost of housing so that it brings large numbers of additional families into the new home market and encourages substantial increases in residential construction.

(6) The program should permit the construction of housing in any part of the metropolitan area where land is available at reasonable prices without regard to arbitrary municipal boundaries. In this sense, the program should operate as the private housing market does, through customary private marketing mechanisms.

(7) Federal credit should not serve to reduce the incentives of the private building industry to achieve greater economies in financing merchandising housing. Federal credit should not be used as a substitute to permit increases in the prices of housing. The program should be organized to create positive incentives for cost reduction and for building in the moderate price classes.

(8) Federal credit for middle income families should be directed toward forms of housing which minimize the operating cost component of monthly housing costs.

A PROGRAM PROPOSAL

These criteria can be met by a federally aided middle income housing program which provides loans at interest rates below market rates to families who cannot afford new housing at the present time. The interest rates on such loans might vary from 1 percent to as much as 4 percent. They could be administered and serviced through conventional mortgage-lending channels using the existing procedures of the Federal National Mortgage Association. In order to provide strong incentives for cost reduction, such loans should be applicable only to conventionally financed, FHA insured sales development which were ascertained to be the most economical being produced in any housing market, or to projects built by private nonprofit cooperative or rental housing companies. Elements of such a program are described below.

Financing arrangements

The Federal National Mortgage Association or some similar instrumentality should be authorized to make mortgage loans at interest rates from 1 to 4 percent to families requiring such loans in order to obtain new sales or rental housing. Funds for such loans should be obtained from the Treasury at the cost of money to the Treasury. If a portfolio of such loans was reasonably balanced, as between loans bearing an interest rate of below the cost of money and loans bearing an interest rate of above, the net cost of such a lending program would be zero. Some share of the administrative cost might well be supported by direct appropriations as is the case with the agricultural programs having a similar degree of public interest.

FHA approved mortgage lenders should be authorized to make such loans for FNMA's portfolio under approved quotas. Either FNMA or FHA could issue prior commitments to assure an equitable distribution of such loans between different market areas. Consideration might be given to encouraging the use of the liquidity reserves of private lending institutions for low interest rate mortgage loans by authorizing FNMA to issue commitments to provide cash on demand for any such loan held by a mortgage-lending institution. If such commitments were recognized as the equivalent of cash, lenders might utilize otherwise idle funds or funds invested in short-term governments for such mortgage loans.

This proposal is similar to, but goes beyond, bills considered by the Congress in recent years. S. 2246, 1950, proposed a somewhat similar program with interest rates at the cost of money to the Government plus one-half of 1 percent for administrative expenses and loss reserves. Bills introduced in succeeding years have contained a similar provision. Some have proposed that FNMA be the administering agency, others that a new cooperative mortgage corporation be established. While a program involving loans at the cost of money to the Government plus one-half of 1 percent would be of distinct assistance to middle income families, it would serve only a fraction of the families being relocated by renewal and not served by public housing. By varying interest rates in accordance with need, these families could be served.

Administration through private lenders

If such a program is administered by private lending institutions, assurance would be provided that low interest rate Federal mortgage loans would not be granted to families who could afford conventional private mortgages. FHA approved mortgage lending institutions could be provided with instructions concerning the income levels of various size families eligible for Federal mortgages in each community. They could make such mortgage loans under a prior commitment on any selected project being developed with FHA financing and subject to FHA inspection. The mortgage lender could review mortgage applications in the conventional manner to ascertain whether the borrower was an acceptable risk for an FHA-insured mortgage. If the borrower proved to be an acceptable risk with respect to character, stability of employment, prior credit record, and other criteria normally used by mortgage lenders, but could not, in the opinion of the bank's credit department, afford the monthly payments required by a conventional FHA loan the bank would be authorized to make a Federal loan at a lower interest rate. The rate would be ascertained in accordance with standard procedures so that the family would pay an interest rate which would produce a total monthly housing expense equal to 25 percent of gross income or 20 percent of income after allowances for the number of dependents involved.

Although written for a 40-year period, each loan would be callable or terminable with respect to its interest rate at the end of every 5 years. At such times, the lending institution would request a credit report on the family which is the beneficiary of such a loan. If the family's income at that time were above its original income, the interest on the loan would be raised to an appropriate level. If the income of the family was sufficient to convert the mortgage to a conventional private interest rate, the mortgage would be automatically transferred from the portfolio of FNMA to that of the administering lender as a regular FHA-insured loan. The lender would be paid the usual mortgage service fee for his services.

Advantages to builders

A program of the type described above would be most attractive to private builder, since it would, in effect, provide them with an assured market of customers needing homes and who otherwise could not afford to purchase or rent new homes. To prevent easy credit being used to sell homes at inflated prices, commitments for such Federal loans should be issued only for the most economical housing developments in each metropolitan area. FHA field offices in each community normally finance one-half or more such developments and are therefore in a position to ascertain which projects offer the most house for the money in each market area. The FHA, reviewing applications for commitment from builders, could select from among such applications the houses offering the best value in the lower priced brackets in each of the major sections of the housing market area. Builders of such homes could then be offered a conditional commitment for Federal loans with respect to any 25–50 percent of the homes in any such development.

In view of the marketing advantages of the Federal loans, builders might be required to sell such homes at 2 percent less than the market price otherwise charged, but in no event could they charge more for any home financed with a Federal loan than was currently being charged for identical houses sold conventionally with FHA mortgage insurance. Thus, the market would serve as a price-setting mechanism to avoid the inflationary effects of ultraliberal terms. At any given time, the ultraliberal terms would be available only to those projects which were deemed to be the most economical (for various sizes of homes) being produced at the time. This selection would not only insure that the beneficiaries did not purchase excessively priced or luxurious homes, but it would also offer powerful incentives to builders to concentrate on projects in the lowest possible price class, rather than upon higher homes.

Since the program would provide a firm market, from an additional income group, and with financing not requiring financial fees, builders should be attracted to the program. Ideally, they might expand production plans by the amount of the Federal loan commitment offered. Builders would, of course, be free to approve the credit risk of purchasers as they are in any private development.

Selection of families

The program of preferential mortgage credit terms such as that described above, would attract far more customers than could be accommodated by any foreseeable amount of public loan funds. Obviously, some device to ration such mortgage loans or to establish priorities for them would be necessary. Such a preference system could be readily administered by existing public agencies and private mortgage lending institutions. The number of preferential mortgage loans available in any community would be limited to approximately the number of families estimated to be displaced by urban renewal and other public development programs during any 1- or 2-year period. The existing relocation agencies in these communities, whether they be housing authorities or redevelopment authorities, would be authorized to issue certificates of priority to families being displaced and in need of housing. These certificates would enable displaced families to examine the development being built with preferential term mortgage commitments and to apply for their purchase through the mortgage lending institution servicing loans on the project. Each such lender could be required to give families with priority certificates preference for Government-aided loans as against other families applying in any 30- or 60-day period. In each case, of course, the builder and the mortgage lender would exercise their normal review as to the credit of the purchaser.

The same public agencies might also be authorized to issue a second preference priority to families not facing displacement but otherwise unsatisfactorily housed. This would include families living in substandard housing and families in the appropriate income groups who are living in overcrowded housing. Since the number of such families at any time would be quite large, it would be reasonable to expect that they would constitute a very adequate market in any metropolitan area. Local agencies might find it desirable to establish other criteria of priority in this second class which would serve to assure

that the most deserving families, as measured by some objective criterion of need, would be given second priority certificates before others. Local agencies already use such criteria in determining admissibility to public housing and other forms of welfare aid. Income, family size, condition of present housing, continuity of employment, and seriousness of effort to find housing, could obviously be usable criteria in establishing such preferences.

Downpayments and equity rights

A middle-income housing program of the type described above should normally require a 5 percent downpayment of families purchasing homes with Government mortgage loans. In the case of displaced families, the local public agency issuing a priority certificate might be authorized to examine the assets of the family. Where such families did not have the funds to make such a downpayment, they would be eligible to purchase the house on a contract basis with the payments credited to the downpayment until they amounted to 5 percent of the initial purchase price. At that time, the property might be converted from a land contract purchase to a conventional purchase.

Since the families purchasing a home with this plan would be acquiring an equity made possible through ultraliberal Government interest rates, the plan should regulate resale provisions. Homes should be eligible for resale with conventional mortgage financing at any time. This would enable the homeowner to move when he desired to do so without any loss and, under favorable circumstances, with a small equity. The Government mortgages, however, would run with the family rather than with the property and would not be transferable to any subsequent purchaser. If the original purchaser was unable to sell the home with conventional financing, he could have the option of turning over his rights to the Government by notice to the administering lending institution. The lender would then be authorized to resell the home subject to the original mortgage terms; i. e., on a Government loan, to any new family in the preference classes then eligible to purchase similar properties. To the extent that middle-income families move about as do other families, this would give each administering lending institution a small revolving pool of new and older homes financed with ultraliberal mortgage terms.

The mortgage instrument should also provide incentives to families to accelerate their payments on the mortgage as increases in income permitted. Incentives for such accelerated payment might be created by allowing larger monthly payments to be credited to amortization rather than higher interest in the first 12 months following any substantial increase in family income. Under these circumstances, the family might substantially reduce the amortization period involved in the mortgage and acquire a home in 20 or 25 years, rather than 40 years. The Government would gain by having the interest raised after 12 months to the higher level justified by the family's increased income, rather than to wait until the end of a 5-year period when the mortgage would be subject to review and upgrading of interest rate to accord with the family's new income.

Cooperative and rental housing

Ownership cooperatives offer an excellent device for administering the type of program described above. Cooperative management would permit most of the economies of individual homeownership, the additional economies deriving from point purchasing arrangements, and a ready vehicle for the administration of changes in terms such as those which would apply to other sales types of projects.

Two plans are suggested which would permit development of rental housing projects offering some comparable means of using Government credit to make new homes available to middle-income families. The first of these would offer mortgage loans to rental housing projects on terms involving no real cost to the Government and without continuing income review. The second, involving Government subsidy of mortgage interest rates to permit the housing of families of substantially lower incomes, would require such review. The rents obtainable under these plans are illustrated in table 135. This differentiation is necessary in any effort in which the Government seeks to extend preferential credit terms to families needing such assistance through private institutions. While we accept the need for the review of income when extremely large subsidies are involved, it is generally accepted that such income review cannot be conducted only by profit-seeking agencies. Where private companies are involved, problems of accountability and equity may come into conflict with the sponsor's interests and jeopardize the objectivity of the review involved.

The first of these plans utilizes a Government loan to about 3½ percent interest to any private nonprofit rental or cooperative corporation. Such loans made for amortization periods of up to 40 years would permit the construction and operation of private nonprofit rental housing for families displaced by public action and those living in substandard housing. The rents on such housing would be established to yield debt service, operating expenses and reserves. Since the loans would be merely an extension of Government credit without direct subsidy, excess income would be applied to accelerated amortization after the establishment of reasonable reserves by the nonprofit corporation. Such a corporation need not exercise a continuing review over the income of the families which occupy relocation housing of this type. Admission to such projects would be under a preference system with priority first to families being displaced by renewal and other public programs and, second, to families living in substandard or overcrowded housing. Where such families, at the time of admission, could afford to pay higher rents than the established minimum rent schedule, they would be charged such higher rents. The rents charged would be established at 20 percent of income as evidenced on a credit report.

Such a program would produce a modest number of rental developments under nonprofit, eleemosynary sponsorship and would be intended to serve displaced families. The rents obtainable would be $10 to $15 below the rents available in new, economy type private speculative rental housing. Much of this saving would be attributable to reduced interest costs, but part of it would be attributable to the nonprofit character of management and sponsorship. This reduction in rents would accommodate families with incomes of $500 to $800 per

year below these accommodated by new private rental housing. It would not serve the much larger number of families well down in the middle income group. For this reason alone, the number of such units proposed by local groups would probably be small.

TABLE 135.—*Estimated total monthly rents in nonprofit or cooperative housing with 40-year mortgages, various interest rates, various ratios of unamortized, non-interest-bearing loans* [1]

Construction cost and financing arrangement	Monthly rents and income groups served at mortgage interest of—							
	3½ percent	Income group	2½ percent	Income group	1½ percent	Income group	1 percent	Income group
IN NORTHERN CITIES WITH HIGH COSTS								
$10,000 apartment	$72	$4,300	$67	$4,000	$61	$3,650	$59	$3,500
10 percent no-interest loan			63	3,900	59	3,550	56	3,350
20 percent no-interest loan			60	3,600	56	3,350	54	3,250
30 percent no-interest loan			57	3,410	53	3,170	51	3,050
40 percent no-interest loan			53	3,200	50	3,000		
$9,000 apartment	65	3,900	61	3,650	57	3,400	54	3,250
10 percent no-interest loan	62		58	3,500	54	3,250	52	3,100
20 percent no-interest loan			55	3,300	52	3,100	50	3,000
30 percent no-interest loan			52	3,100	49	2,950	48	2,900
40 percent no-interest loan			48	2,900	45	2,700		
IN AVERAGE COST CITIES								
$10,000 apartment	$68	$4,100	$63	$3,780	$57	$3,400	$55	$3,300
10 percent no-interest loan	64		59	3,550	55	3,300	52	3,100
20 percent no-interest loan			56	3,360	52	3,100	50	3,000
30 percent no-interest loan			53	3,180	49	2,950	47	2,800
40 percent no-interest loan			49	2,950	46	2,750		
$9,000 apartment	61	3,650	57	3,410	53	3,170	50	3,000
10 percent no-interest loan			54	3,250	50	3,000	48	2,870
20 percent no-interest loan			51	3,050	48	2,900	46	2,750
30 percent no-interest loan			48	2,880	45	2,700	44	2,650
40 percent no-interest loan			44	2,650	41	2,450		
IN LOW COST CITIES								
$8,000 apartment	$56	$3,350	$51	$3,050	$47	$2,810	$45	$2,700
10 percent no-interest loan	53		49	2,950	45	2,700	43	2,560
20 percent no-interest loan			46	2,750	43	2,570	41	2,450
30 percent no-interest loan			43	2,560	41	2,450	39	2,350
40 percent no-interest loan			40	2,400	39	2,300		
$7,000 apartment	50	3,000	46	2,750	43	2,570	41	2,450
10 percent no-interest loan	49		44	2,650	41	2,450	39	2,350
20 percent no-interest loan			42	2,500	39	2,350	37	2,210
30 percent no-interest loan			39	2,350	37	2,270	36	2,150
40 percent no-interest loan			37	2,200	35	2,100		

[1] Assuming 20 percent of income for rent. Further assumes nonprofit operations at approximately costs of owner-operation.

Source: Table 133.

Substantially larger credit would be necessary to accommodate families in the income groups immediately above the levels served by public housing. For these types of families a 1 percent interest rate, or such a loan coupled with a non-interest-bearing loan would be required. A 60 percent, 40-year mortgage, bearing an interest rate of 1½ percent and a 40 percent non-interest-bearing mortgage, on which amortization was deferred until repayment of the first mortgage had been completed, would reach deeply into the middle-income housing market. If such a program were administered as described below, the mortgage might be repaid in 40 to 50 years at an interest rate comparable to the lowest available to the Government on short-term Treasury notes.

The rents on such projects would have to be set at the minimum rate which could pay debt service on the first mortgage, plus operating costs and reserves. Any income above the rent schedule should be credited first to interest payments, until they reach the level of 3½ percent, and then to interest on the second mortgage. The resulting housing would be made available with preference to families displaced by public action and those living in substandard housing. The incomes of such families would be set initially at 20 percent of monthly income, but no less than the rent schedule. Income would have to be reviewed annually and rents adjusted to maintain a constant 20 percent ratio. After admission, families would never be subject to eviction as in the case in public housing, but would be required to pay higher rents as their incomes rose. All income increases would be reflected first in increased interest to the Government and then to accelerated amortization.

Projects of this type could obviously be administered only by private agencies which would command the confidence and respect of the public. They would have to be nonprofit, of an eleemosynary character, perhaps governed by boards of directors selected from among elected community officials and trustees or officers of private community welfare agencies. This type of management would help to insure their nonprofit character and make more acceptable the review of family incomes required for continued occupancy.

Financing terms of the type proposed would enable such private nonprofit rental housing corporations to accommodate families with incomes at about the levels at which families are evicted from public housing projects. Some local communities would doubtless extend tax exemption to such projects, thus enabling them to compete in income groups served with public housing. Such a program could not compete with welfare recipients of extremely low income who require cash subsidies, but it would considerably expand the supply of new low-rent housing. Because of the tendency of families' incomes to rise, such projects would tend to be amortized over periods shorter than the original schedule would suggest and they might thereafter be operated as a private welfare type of housing for low-income families.

ADJUSTMENTS IN OTHER GOVERNMENT HOUSING PROGRAMS

The program outlined above involves some departure from the principles which have governed Federal programs. On the other hand, they involve no new principle not already widely used in Government housing and other programs. Government loans to home building have been used in one form or another for more than 25 years. The Home Owners' Loan Corporation made direct loans to banks, to homeowners, and to newly formed lending institutions at rates which were below those existing at the time. In recent years, the Federal Government has loaned more than $5 billion through the Veterans' Administration and the Federal National Mortgage Association to families having no demonstrable need for such loans. Their procedures provided no opportunity whatsoever to ascertain whether the borrowed funds were being used by middle income families or families who could well afford conventional interest rates and mortgage terms. Thus, the

programs proposed involve no departure in principle, but substantial changes in the purpose and practice of Government lending for housing.

If Government loans through the FNMA are justifiable for higher income families who may not need them, it is difficult to see why they may not be justified for families who do need such a loan. The mechanisms proposed are attempts to illustrate that it would be possible to develop systems of public credit aid to private housing which would fill a huge gap in the housing market, permit a substantial expansion of new residential construction, utilize private lending and building institutions and thus speed both the relocation of families in renewal programs and the eventual solution of problems of housing shortage.

It will doubtless be contended that the Government cannot afford to make the volume of loans required for such a program. On the other hand, it could be asked whether the Government can afford to make such loans as it has in recent years to families whose income does not not require such aid. Obviously, Federal credit aid has been uesd for the purpose of maintaining relatively inflexible interest rates on Government insured and guaranteed loans. If these interest rates were made more flexible, so that they could respond to changes in the money market, the need for Government lending under various guises would be considerably reduced and such lending authority could be used in areas where it is urgently needed.

Presumably, Government lending at market rates would continue to be needed to serve the special needs of renewal programs. This distinction is recognized by law in the so-called special assistance programs of the FNMA. But special assistance programs have used only a fraction of the loans made by FNMA in recent years. The great bulk of such loans has been made to conventional suburban home building and have been used by families who may or may not have required such aid. Thus, economy and fiscal conservatism would suggest that a middle-income housing program of the type described above be substituted for present lending programs, until such time as general economic conditions might again require further expansion of Government aids to maintain home building volume.

GOVERNMENT AIDS TO FINANCING PRIVATE PURCHASES OF HOUSES

SHERMAN J. MAISEL, Professor of Business Administration, University of California, Berkeley, Calif.

This paper is submitted in response to the following question:

> What should be done to provide a source of housing credit adequate to meet the needs of urban families who are potential purchasers or renters of privately owned standard housing but whose incomes are not high enough to permit their participation in existing markets for such housing?

I cannot attempt to answer this question completely in the limited time available, for it is obviously a restatement of the entire purpose of these hearings. Almost all Government credit aid is to help potential purchasers otherwise excluded from the private market. I do, however, desire to call attention to two concepts which are significant in this search for a good housing policy.

1. Many parts of our housing program have concentrated on particular market techniques rather than on the basic goal of aiding people who need help to get better housing within their payment capabilities. A reconsideration and restatement of the actual aims of each part of our housing program would probably greatly increase its efficiency. In such a restatement, it would be useful to make clear whether or not a subsidy is involved and, if so,, whom Congress intended to aid.

2. There are many successful programs based on other formulas than those now in use by the Federal Government. A careful consideration of these other programs—State, local, and in foreign countries—can furnish many insights into possible new answers to the Federal problems. As an example, I outline a highly interesting approach which should be given careful study; that of one State's experience with a program based on Government purchases of houses which are then sold under contracts of sale to individuals.

Parenthetically, I should make clear that I am not prejudging this committee's deliberations as to whether or not Government subsidies to home buyers should be continued. However, if the decision is made, as in the past, to continue such programs, it is vital that they be as good, cheap, and efficient as possible. Even those who feel that a particular program is a waste of the Government's money are desirous of keeping its costs at a minimum.

WHAT IS THE PURPOSE OF THE GOVERNMENT'S HOUSING PROGRAM?

In his statement outlining the reasons for these hearings, Chairman Sparkman performed an extremely valuable service. He, in effect, called attention to the fact that these hearings are to attack the over-

all problems of mortgage credit as an aid to better housing for all. It would be unfortunate if the discussion is primarily concerned with methods of tinkering with the administration, traditions, rights, or problems of existing individual programs.

We need constantly to remind ourselves that the housing problem and its credit needs are general ones. Otherwise, the interrelationships of the parts and their true impact for or against better housing may be neglected in attempts to attack or foster specific agencies and programs. In his call for these meetings, Senator Sparkman stated:

> My theory is that the production of housing should be based upon the needs of the people. Of course, I realize that the only way we can satisfy this need is by having an adequate supply of mortgage credit available at all times.
>
> The problem is a well-defined one, and I believe that the solution lies in answering the question: How should Federal programs be supplemented or modified to insure a supply of home mortgage credit adequate to meet the great demand anticipated in the 1960's, upon terms and conditions which home buyers can afford and which are economically sound?

Two major purposes of the Government's programs are (1) the correction of imperfections in the private housing and credit market through better knowledge, information, and institutional shifts; and (2) the subsidization of home buyers who are held unable to afford the terms and conditions of the private housing market.

THE PERVASIVENESS OF SUBSIDIES IN HOUSING PROGRAMS

Because many people believe that a subsidy is wrong or even immoral, we frequently fail to state clearly the real goals of housing programs. All offer Federal aid of one type of another to families in need of housing. Almost all fit Webster's definition of a subsidy: "Any gift made by way of financial aid." If people could meet their needs at the normal market credit price, we should probably, at a minimum, abolish FHA, the VA loan-guaranty program, the special-assistance programs of FNMA, and the low-rent programs of the Public Housing Administration. Each of these programs grants the use of the Government's credit in some form or other by way of financial aid (subsidy) to home buyers.

The effect of such a credit grant is clear in theory, although its actual repercussions become difficult to follow in the market. Such grants have very specific costs and are not free, as is sometimes erroneously claimed. A borrower who receives the aid of the Government can obtain more money and at a cheaper rate than would otherwise be possible. If there are limited investment funds available, other borrowers not so aided will have more difficulty in borrowing and will have to pay higher fees. If the Government's credit is limited because of fear of inflation or other constraints, the grant of its credit under one program will limit that available to other potential claimants.

Our present national housing policy consists of a hierarchy of aids. If a person can afford market interest rates but needs help in making down and monthly payments, he is lent the use of the Government's credit through FHA and VA. If he still is excluded but could be

brought in with still longer terms and lower interest rates, the Government may remove part of his burden by a subsidy through FNMA's purchase of his mortgage above the market price, or by the VA's direct lending. If he cannot afford this rate, or if he is ruled out of the market on other grounds, he may be allowed to rent a unit subsidized through PHA.

The fragmentation of subsidies in this form is logical. Just as there are many ways to skin a cat, so are there many ways to help people pay less than market credit terms. The use of different programs is likely to be more efficient than forcing all into a monolithic giant. A major danger does arise, however. We may become so engrossed in the particular features or operations of a program or agency that we may lose sight of the main goal. We may also find ourselves subsidizing the wrong groups. These hearings can be extremely useful by making clear the reasons for the establishment of the housing programs and their supposed goals.

Each agency, whether HHFA, FHA, VA, FNMA, or PHA, needs occasional reminders of its reason for existing. Each should periodically send out notices to all employees saying, in effect, "We operate because Congress and the President decided that some home buyers could not afford market credit rates. As a result, they established this agency to aid consumers to obtain housing as efficiently and at the lowest costs consistent with other Government objectives."

The problem constantly facing Congress is to determine whether the housing program as a whole is working as efficiently as possible. Is the United States getting its full money's worth in better and cheaper housing for the aid it is granting? While I sometimes feel strongly that this may not be the case, particularly because of a lack of research, I judge that others on this panel will fairly evaluate the efficiency of the existing programs.

GOVERNMENT PURCHASES OF HOUSES FOR SALES UNDER CONTRACT TO INDIVIDUALS

I want to take this opportunity to describe a different type of public program, which has apparently been successful and efficient. If carefully studied, it may well indicate a better way of providing housing for those low-income groups, such as those displaced by urban-renewal programs, who Congress believes should be purchasers of privately owned standard housing but whose incomes are not high enough to permit their participation in existing markets.

This program is the California veterans program for homeownership, commonly called the Cal-Vet plan. This scheme of publicly owned, subsidized housing has been one of the most popular California State programs. Its bond issues have appeared on the State ballot 11 times. Because they have had little or no vocal opposition, they have required minimal electioneering. All have passed by extremely wide margins. On the average, the bonds for the program have been approved by about 80 percent of those voting.

PURCHASES AND SALES

How does this apparent paragon of public-housing programs work? What are its great advantages over the existing Federal programs? Under the Cal-Vet program an eligible veteran picks his own future home. He enters into a temporary purchase agreement for any house in any location he desires. The Cal-Vet agency next inspects the house and appraises it. If the house meets the agency's criteria of minimum standards, maximum price, and minimum value (i. e., fair price), the agency agrees to purchase the house and to take title in the name of the State of California, Department of Veterans' Affairs.

The State of California issues regular State bonds to obtain cash for the purchase of this housing. The rate for these long-term bonds has varied with the credit of the State and the market for tax-exempt bonds. On the average, their yield has been about 2½ to 3 percent under the conventional mortgage market of the same period. In order to calculate interest charges to its clients, the agency takes the average of the interest rates it is paying and adds a sum for operating costs and reserves (both together have averaged about 0.6 percent per annum on unpaid balances). Until recently, this combined rate was 3 percent. It is now 3.5 percent.

After taking title to the desired property, the agency enters into a sales contract with the client, agreeing to sell him the house he desires on a very flexible basis. The contract, in theory, calls for payments to be made on a level basis, with amortization of the principal over 20 years and with an assumed interest rate based on the State's own payments. The agency requires a minimum downpayment of 5 percent, but it can be reduced below this by the amount by which the agency's appraisal exceeds its purchase price. In effect, if the appraisal exceeds the price by 5 percent no downpayment is required.

The agency has made special bulk purchases of fire, life, and disability insurance. These are sold at cost to those holding the contracts of sale. The sums owed for this insurance are not added to the monthly payments, but instead the contract payment period is extended beyond the basic 20 years. The period of payment has also been extended in cases of sickness or other legitimate inabilities to make current payments, and when interest rates rose above their initial level. The original payment contract is really nominal. It sets a maximum monthly payment. If more money is needed for extra services or for other reasons, the period over which payments are to be made is increased.

The sales contract specifies that the purchaser must occupy the house himself except in case of emergency or other need, in which case he can receive permission to rent it. The contract may be paid off in full at any time allowing the veteran to take clear title.

THE FORM OF SUBSIDY

The subsidy involved in these agreements is obvious. The client saves the difference between the interest rate paid on tax-exempt State bonds and the interest rate on mortgages. He receives more favorable terms for downpayments and monthly payments than are generally available. He is enabled to purchase various types of insurance at

group rates. A tax subsidy is also involved. Instead of having to pay taxes on the total assessed value of his house, a purchaser under contract is assessed only for his so-called possessory interest, i. e., his own equity in contrast to the purchase price actually paid by the State. His possessory interest is defined as 30 percent of the purchase price in the first 5 years, 45 percent in the next 5 years, and so on.

It should be made clear that the subsidy under this program as with the FHA is indirect. The State only lends its credit. Unless there is an unexpected fall in house prices, no call need be made on the State's guaranty. In fact, as with the FHA, to date no payments for this program have been made from the State's general fund.

THE CRITERIA FOR ELIGIBILITY

For any subsidy program to succeed there must be careful consideration of who is to be eligible, and under what circumstances. On what basis does a person become eligible for the Cal-Vet program? In the first place, he must be a war veteran born in or enlisted from California and purchasing a property in the State. In the second place, a restriction is placed upon the value of the house to be purchased and the amount of the loan. The maximum value of houses which the State would purchase rose gradually from $5,000 in 1921 to $10,000 in 1937, to $25,000 today. The maximum amount of its own funds the State would use rose from $5,000 in 1921 to $15,000 today. The differences between maximum value and maximum use of State funds would equal the purchaser's downpayment.

The final criterion deals with the veteran's finances. He could not be so rich as obviously not to need the subsidy. Generally this has meant that he and his wife could not have more than $10,000 worth of other property. He could not be so poor that it was probable that he could not meet the agreed-upon monthly payments.

In effect, then, eligible veterans are screened by two processes: (1) A direct limitation on his total property or capital, and (2) an indirect income limitation. This latter arises from the assumption that a high-income person will not choose to live in a low-priced house merely to gain the subsidy. In this it is similar to the logic behind loan limitations on FHA section 221 and similar houses. Now that the value of an eligible house can be $25,000 this limitation means little. As a result a direct rationing and priority system has had to be installed.

SOME ADVANTAGES OF GOVERNMENT PURCHASES WITH CONTRACTS OF SALE

In order to stimulate discussion, it may be useful to spell out some of the implications of such a program of purchase-sale contracts on a national scale. I do not assume that the clientele for such a program would be picked primarily from veterans as in the California case. Instead those eligible would be selected under standards established by Congress and the Executive. Eligibility could be on an income basis, or by setting a maximum value of properties as under existing Federal programs, or on whatever other basis Congress believed necessary to aid certain groups in the purchase of privately owned and produced standard housing.

1. Government purchase for sale establishes a basic method of meeting mortgage credit shortages similar to that of FNMA and public housing. Instead of potential homeowners having to line up at the limited trough of mortgage credit, their purchases would be made with money drawn from the wider bond market. These could be either direct issues of the Government or guaranteed issues as in the case of FNMA and local housing authorities.

2. The interest rate for such a program would probably be lower than the mortgage interest rate. It would draw upon the more perfect bond market. Risks to the lenders would be more calculable and less.

3. The Government could set its schedule of payments so as to meet its full costs and only subsidize through its guaranty, or it could subsidize by additional payments from other revenue to any extent it deemed advisable.

The procedures of setting the subsidy could be simple and could vary with need. Thus the nominal contract could call for some standard rate of payments, for example the maximum terms under the existing VA program or under FHA section 221. A policy could then be established of reducing payments below this amount in cases of proven need. The actual payments might be set for fixed periods—say 2 years—at a time depending on the purchaser's estimated ability to pay. The amounts not paid would still be due on the contract, but would not have to be paid until the end of the contract which would probably be when the house was sold. If conditions were to continue as they have in the past 20 years, the actual subsidy would reduce to zero in the great majority of cases.

4. The program would greatly increase homeownership. The client would have the right to his house as long as he lived in it, maintained it, and met the agreed payments. He could sell it when he so desired by paying off the contract including all reductions granted under the initial agreement.

5. Such a program would solve many of the most pressing problems of the existing public-housing program. It would draw on the skills and greater efficiency of the individual house builder. It would do away with the institutionalized large-scale housing project. It would halt the segregation of people into special low-income housing groups. People would not have to move when their need for a subsidy was finished. They would remain in their house, paying the full market price under FHA or similar terms in the same manner as all their neighbors.

6. A purchase-sales program would probably be far more efficient than existing public-housing programs. It would offer a market for used rehabilitated units. These units tend to be among the cheapest standard dwellings. Under our present procedures, these units cannot be used for public housing. The lack of a low-income market keeps many units from being rehabilitated which otherwise it would pay to improve. Such a program would greatly lower administrative and operating costs. The owner would keep up his own unit. The whole do-it-yourself movement shows how much cheaper such maintenance can be. There would be no necessary management overhead, but simply a loan receipt program similar to existing mortgage brokers.

On almost every basis a purchase-sales program would seem to be more efficient than existing public-housing programs for normal family groups. I have selected this as merely one example of new but tried ideas which might, if carefully considered, improve existing housing policies. These hearings will have an extremely valuable result if they lead to a careful reconsideration of the logic of existing programs and, at the same time, compare them with potential new ideas and improvements.

SOURCES OF FARM HOUSING CREDIT

Department of Agriculture, Agricultural Credit Services

This memorandum is directed to the following question:

> What should be done to provide a source of housing credit, adequate to meet the needs of farm families who are potential purchasers or renters of privately owned, standard housing, but whose incomes are not high enough to permit their participation in existing markets for such housing?

Implicit in this question is the thought that farm and urban families living in substandard homes should have equal opportunity to benefit from Federal assistance to improve their housing. The question suggests the development of a rural counterpart to low-cost public-assisted housing in urban centers.

The term "farm families," as used in the basic question and in this discussion, is presumed to be those families living in rural areas because their agricultural activities require their living on the land they operate as distinguished from a broader interpretation which would encompass all persons living in rural areas.

The basic question further implies that the farm families to be considered are those who have not accumulated sufficient resources to provide adequate housing on their own accord or who have not accumulated sufficient assets to qualify for housing loans from private and cooperative lenders.

The factors previously discussed under the subject "What should be done to increase the supply of standard dwellings for underhoused farm families?" also are generally applicable to this group. This discussion, therefore, will cover largely other aspects of the question.

An analysis of the nature of the problem is necessary to bring it into perspective. The basic reasons why some farm families do not have better housing and alternative, practical and economically feasible solutions merit further study. Research in construction techniques, standardization of dimensions of building materials and home equipment, the practical use of locally available materials, the conversion of existing buildings, the design and construction of functional and flexible service buildings that meet the needs of our constantly changing agriculture also are essential to developing approaches to providing low-income farm families a better opportunity to improve their housing conditions.

Educational processes for transmitting, not only to farm families but to building material manufacturers, building suppliers and creditors are necessary to developing an awareness as to the nature and character of the housing problems with which these farm families are confronted and to the development of effective programs for improving their living conditions.

Beyond sustained research and educational programs, which can result in developing minimum costs in construction design and techniques, and the educational activities which can motivate farm families to want better housing is the problem of how this better housing for low-income farm people will be financed.

Inadequate housing in rural areas is conspicuously different from inadequate housing in urban areas; the approaches to the problem, therefore, also are different. In urban centers, where the place and kind of employment are not directly associated with the residence, the development of public low-cost or low-rent housing in concentrated areas has proved to be a practical approach to providing better housing for low-income and previously ill-housed families. The isolation of the farm home, the need for a residence located on the land being farmed, and the fact that generally the home and the farm business are integral parts of the family's business operations, necessitate considering most of the farm homes as individual entities, dependent upon the returns of the farm business for financial support.

The process of providing financial assistance to help farm families in the low-income levels achieve better housing may be considered broadly in 4 general categories; namely (1) Government construction of facilities with the units being leased or sold on long-term purchase contracts to farmers; (2) direct contributions or grants at the time of construction or improvement; (3) contributions to farm families to supplement their incomes to meet loan payments required to provide better housing for the family; and (4) a favorable financing program that will stimulate low-income farm families to provide housing within their capacity to repay.

All of these methods have been tried on either an experimental or substantial scale basis. The experience of the Department of Agriculture has been that the most practicable means of providing an opportunity to farm families in the low-income levels to improve their level of housing is a favorable loan program at long-term, low-interest rates.

The subsistence homesteads, the migratory farm labor housing program, and the rural public-housing program of the 1930's and 1940's are all examples of Government-owned and financed efforts to provide better housing to low-income farm families. All of these programs have now either been liquidated or are in the process of liquidation.

Since agriculture in this country is largely one of individual homes on individual farms, this is a difficult environment in which to interject Government ownership of the home. This was, however, tried some 15 or 20 years ago. Some 500 houses were built in scattered areas in 5 States. This program was designed to provide new homes to owners and tenants who were living in substandard homes and were unable to afford an acceptable home.

To participate in this program, the farm owner was required to give to the Housing Authority title to one acre of his farm as a site for the new house and to tear down or convert to some other use the existing substandard dwelling. In addition to making rental payments, the occupant was required to do all major repair work necessary to keep the house in good condition. All of the homes were built by local or private contractors. They were planned, owned, and managed by the local rural housing authority.

With the exception of a few units which are reported to be in litigation, these units have all been liquidated. The administrative problems encountered in endeavoring to operate such a program are manifold. The separation of ownership between the farm home and the land was a synthetic one. The problems of having farmer-occupants maintain their payments, keeping the property in good repair, and the problems associated with the transfer of the unit were difficult to administer.

Outright grants were authorized by the Housing Act of 1949. These grants were made to people who were in desperate need of minimum shelter. Under that program, 790 grants, totaling $363,674, were made. Although these grants helped some farm families keep out the wind and the rain, they accomplished little from a long-range standpoint. Furthermore, the making of grants would tend to increase the family's inclination to remain fixed on what probably was an inadequate unit and make them reluctant to seek more profitable employment elsewhere.

An approach to making annual contributions to farm families to enable them to have better housing is authorized under section 503 of title V of the Housing Act of 1949. Under this authority the Government, under certain conditions, could make a long-term loan to a farm owner and could make contributions to the borrower by forgiving part of the indebtedness due on his housing loan. If a borrower during the first 5 years of his loan was unable to meet the annual installment that became due, an annual contribution, up to as much as the interest plus 50 percent of the principal, could be credited to the borrower's account by the Government.

These loans were made to farmers on the basis that during the 5-year period they would increase their income possibilities so that they would be able to meet their payments in full after 5 years. This program also was found to be difficult to administer. Problems were encountered in determining whether a given expenditure by a farmer should be allowed in determining whether or not he was entitled to a contribution. For example: If a borrower had planned to give $50 to his church and instead gave $100 and at the end of the year he was $50 short of being able to pay his installment, would the Government then make a contribution on the housing loan? Additional problems were experienced because farming is a business and as such involves decisions as to whether livestock should be sold or carried in inventory or whether crops should be sold during the calendar year in which they are produced or held for future sale.

During the first several years of the farm housing program, the Farmers' Home Administration in the Department made loans to 761 families under section 503 of the Housing Act of 1949. These loans totaled $3,726,000. Two-thirds of the amount loaned was spent for dwellings and farm buildings. The remaining third was for land purchase and development. Of the 761 families involved, 250 received contributions. The remainder were able to meet their payments as they became due. The total amount of contributions made under this program was $137,967. Of this amount, $46,006 was principal and $91,961 was interest.

Another type of loan, which is authorized under section 502 of the Housing Act of 1949, has proved to be an effective means whereby families who are not able to qualify for credit from conventional sources can improve their housing conditions. Since the farm housing program was authorized in the fall of 1949, the Farmers' Home Administration in the Department has made approximately 30,000 of these loans, totaling $170 million. Seventy-five percent of the loan funds, or almost $130 million was used to finance 14,000 new homes and repair 8,500 additional farm homes. The rest of the funds was used to finance construction and repair of service buildings and farmstead wells.

The lending experience with these loans has been satisfactory. These loans may be made for periods up to 33 years and bear 4 percent interest. The favorable terms of the loans, the fact that they are made by an agency experienced in the business of helping farm families make a thorough analysis of their budgets to determine whether or not they have the ability to repay, and an agency equipped with adequate credit and management assistance tools to help farm families make the most of the resources they have and, if necessary, even acquire additional land and improve their land, acounts to a large extent for the success of these loans.

Farm families live in poor housing, generally not by choice but because of necessity. The major problem is a lack of an economic base to support a better house. For these low-income families in rural areas to improve their economic situation sufficiently to enable them to support better housing there must be continued economic growth and the expansion of nonfarm employment opportunities. Raising their income level on the farm, if possible, or by encouraging them to obtain off-farm employment is a sound approach to improving the living conditions of our ill-housed farm families.

The rural development program of this Department is a localized but comprehensive approach to improving the economic opportunities of low-income farm families. This program, which is under local leadership, backstopped by the various departments of local, State, and National Governments, is underway in selected counties in various areas of the United States. The objective of the program is the development of the physical and human resources of low-income areas so that the families will have an opportunity to improve their levels of living.

[NOTE.—This subject is also discussed by Dr. E. G. Smith in his memorandum on Farm Housing. See p. 173.]

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